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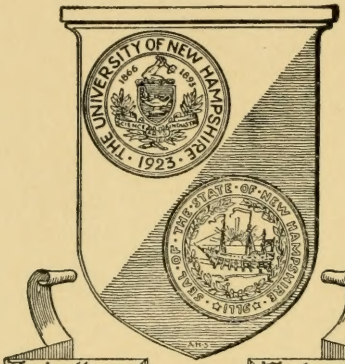

The University
of
New Hampshire

STATE

OF

NEW HAMPSHIRE

ANNUAL REPORTS

FOR

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NEW HAMPSHIRE AGRICULTURE.

TWENTY-SECOND

ANNUAL REPORT

OF THE

BOARD OF AGRICULTURE

FROM

NOVEMBER 1, 1892, TO NOVEMBER 1, 1893.

By N. J. BACHELDER, Secretary.

CONCORD:
EDWARD N. PEARSON, PUBLIC PRINTER.
1893.

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CONCORD, N. H.

BOARD OF AGRICULTURE.

ORGANIZED AUGUST 23, 1870.

MEMBERS.

HIS EXCELLENCY JOHN B. SMITH.

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GEORGE S. PHILBRICK, *Vice-President* .	Tilton.
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JOSEPH D. HOWE	Lancaster.

NAHUM J. BACHELDER, *Secretary.*

GENERAL REPORT.

OFFICE BOARD OF AGRICULTURE,

CONCORD, N. H., November 1, 1893.

To His Excellency the Governor:

The twenty-second annual report of the Board of Agriculture, from November 1, 1892, to November 1, 1893, is herewith submitted.

N. J. BACHELDER,

Secretary.

INSTITUTES.

INSTITUTES.

The meeting of the National Grange in Concord, the excitement attendant upon the national election, and the convening of the legislature in January, which made it necessary for the secretary to be in the office, combined to reduce the number of institutes held during the winter of 1892–'93 below former years, but as far as attempted there was manifested the usual degree of interest. While the meetings of the grange are popular and profitable, receiving enthusiastic attendance and support by the farmers in all sections of the state and accomplishing an immense amount of good for the people of the rural sections, and even advancing the general welfare of the state, yet there is ample opportunity for the Board of Agriculture to carry out its design along all its legitimate lines of work. From the very nature of things there should, and does, exist the most harmonious and friendly relations possible between the two organizations, and the legitimate work of either organization is made more effective and successful by the coöperation of the other. There has been great progress made in institute work since the first efforts were made to furnish aid to agriculture through the agency of farmers' institutes. Not only has the real object of institute work become more fully realized, both by farmers and instructors, but there is a great increase in the available material for such work. Scientific investigations in agriculture are revealing the fact that the successful farmer in the future will depend, not upon brawn but brain. For this reason the

institute work of the Board of Agriculture increases in importance in the same relative proportion with the development of agricultural study and research. In view of these facts, every possible effort should be made to increase the attendance and efficiency of farmers' institutes.

SULLIVAN COUNTY.

CLAREMONT AND CORNISH.

The series of farmers' institutes, held by the State Board of Agriculture for 1892–'93, was opened at Claremont, Wednesday, December 14, and continued at Cornish Flat, Thursday, December 15.

The board was represented by President Moses Humphrey, of Concord, County Member Alonzo Towle, of Freedom, and Secretary Bachelder. The State Forestry commission was represented by the chairman, Hon. J. B. Walker, of Concord, and the Granite State Dairymen's association by Secretary J. L. Gerrish, of Webster.

The assembly was called to order by Erastus Reed, of Claremont, master of the Claremont grange, who welcomed the representatives of the board in cordial terms, and introduced President Humphrey as the presiding officer. In his usual hearty manner the presiding officer replied to the words of greeting, and briefly explained the work of the board and the object to be obtained through the farmers' institutes.

He spoke of the magnificent work being done by the grange in the state and nation, and the work of other agricultural organizations, but there was still room for the farmers' institutes, and for such practical lectures and discussions on farm topics as were given at these gatherings.

At the request of the secretary, Mr. Gerrish discussed the subject of Dairying, which was the first announced for the afternoon. From his long service as secretary of the

Dairymen's association and extensive practical knowledge of the subject, Mr. Gerrish was able to both interest and instruct his hearers. It was claimed that dairying was one of the most profitable branches of farming at the present time, if rightly managed. Great care should be used in the selection of a dairy herd. Select animals for the special purpose for which they are to be used. Raise the heifer calves from the best cows, and feed them in such a way as to develop their milking qualities. Feed all dairy animals liberally with well balanced rations, and exercise the most scrupulous cleanliness throughout. Make dairy products of such excellence that they will prove a trade mark for the producer.

Dr. Towle followed upon Corn Growing, giving a most practical and common-sense talk upon the subject. A leading and emphatic point made was the use of horse and machine power in the place of hand labor. The land should be well ploughed, thoroughly cultivated and pulverized before the seed is planted. All planting should be done with a machine, the ground having been previously marked out, that the rows may be perfectly straight. This will allow running the cultivator near each hill. No hand hoeing should be done. In harvesting, all expense of husking and grinding should be avoided by use of the silo. All details of planting, cultivating, and harvesting were given with exactness, and much interest was manifested in the subject.

At the evening session President Humphrey gave a characteristic address upon Farmers' Opportunities. The oft-quoted saying that "Farming do n't pay" was sometimes the fault of the farmers, rather than of the farm or the business. Farmers have many difficulties and discouraging things, but there are also more opportunities for success than are appreciated. The opportunities for mental and social development, made possible by the grange, could not be too fully appreciated. The advantages of improved machinery

for nearly all departments of the farm, and the teachings of agricultural science in the use of fertilizers and feed, were clearly presented. The farmer should know and utilize the opportunities in his path, as other business men find necessary, before becoming dissatisfied with the farmer's calling.

Chairman Walker, of the forestry commission, discussed the subject of Forestry. This subject has lately become of very general interest throughout the state. Upon the preservation of our forests depends the development of the summer-boarding industry and the supplying of the mountain streams which furnish the vast water-power of the state. It was proposed by the people of the state to legislate in some way in regard to this subject, but it was not yet determined in what direction. Many suggestions have been made, some of which would involve large expenditures of money, and others which would have for their object the education of the people to the necessity of becoming mutually interested in preserving the beauty and grandeur of our New Hampshire forest scenery. The interest already manifested by the people of the state in the subject was a good omen, and indicated that some legislative action would soon be taken.

The session at Cornish Flat on the following day was extremely gratifying to the representatives of the board, from the large and enthusiastic attendance. The leading topics were the same as at Claremont, yet the speakers varied the discussion in such a way as to interest those who were present at both places.

HILLSBOROUGH COUNTY.

PETERBOROUGH.

The annual two days institute, or winter meeting of the Board, was held at Peterborough, December 28 and 29, with a good attendance and marked interest at every session. President Humphrey called the meeting to order at 2 o'clock p.

m., and Ezra M. Smith, Esq., master of Peterborough Grange, No. 35, spoke as follows:

ADDRESS OF WELCOME.

BY EZRA M. SMITH, ESQ.

Mr. President, Ladies and Gentlemen:

The duty assigned me to say the opening words of welcome on this occasion is a pleasant task. It is more pleasant on account of those who are with us today and whom I am to welcome, and you, Mr. President of the Board of Agriculture of this state, who have spent your years in this service until you have passed the limit of life of four score years, together with your associates from every county in this state, and those persons whom you have engaged to assist and instruct us on this occasion and during this two days session,—to you I extend the welcome of Peterborough.

I do not welcome you to a city of large and splendid business blocks, neither to homes of millionaires, nor to the orange groves of the South, nor to the rich prairies of the West, nor to the fertile meadows of the Connecticut or the Merrimack; but I do welcome you to Peterborough, with its happy homes, and with its inhabitants who by industry and economy are able to obtain the necessaries and some of the luxuries of life. I welcome you to Peterborough for various reasons. A theory is always good and necessary; but that theory, unless it results in something that is practical, is dangerous and is a damage. A theory which results in something that is practical is beneficial, is helpful, and is good. I welcome you here at this time, not only to present to us some of these theories which are essential, but to present to us the workings of those theories and the results of those theories in such a way that we may get a practical result from those theories. In agriculture, like many other industries, the margin is small, and the profit is small, if any, and in order to have a profit or margin in agriculture,

or in any other labor, it is necessary that intelligence shall enter into that work.

We welcome you here at this time to give us that intelligence that will help us, not only in farm life, but will elevate us and stir us to more activity and to more zeal, so we may realize the results of labor. Competition is driving. We are competing today with the West. Whatever we raise, whatever we produce, sells at a small profit, if any; and until those western lands, those large ranges, those large farms, shall be reduced to small farms like the farms in New England and the farms in New Hampshire, it seems to me that the result will be the same. When those are reduced so that we can compete with the fertile plains of the West, then our chances will be better.

We welcome you here at this time, not only to give us those theories in relation to raising corn, in relation to raising cranberries, in relation to raising poultry, but those other and various things which touch life at its various points and give us some hints that have been put into practice, so we may have the results without the experiment. Life is too busy, life is too short for each one to try every experiment and find out what the result of that experiment will be. The state has wisely provided this Board of Agriculture, so that they may experiment, so that they may get others to experiment, so that they may go from one town to another, and from one county to another, with the results of those experiments and present them as facts.

What we ask of you at this time is to gather those experiments from different places where they have been made, and bring them to us in such tangible form that we may get the benefit of them, instead of experimenting life long to find results in any certain direction. With these things in view, I welcome you each and all to Peterborough, and I give you a hearty welcome in behalf of the Peterborough Grange and in behalf of the citizens of Peterborough.

THE PRESIDENT. Worthy Master: In behalf of the

Board of Agriculture, and friends of agriculture and Grange friends, I thank you for this kind welcome to the town of Peterborough. We come here with a great deal of pleasure. We come here with the idea of meeting intelligent people, and those who think our services are worth something. We think we have selected as good talent as can be got upon the subjects to be presented to you. It is evident enough that we must keep up with the progress of the times. It is as necessary for the farmer to keep up with the improvements of the times as it is for the mechanic, the lawyer, the merchant, or any one else. I have been connected with the Board of Agriculture something like twenty-two years, and I have been a learner all the time. I hope our friends will get some ideas from us that are worth something to them.

We have recently had the honor of a visit of the National Grange, which held its annual meeting in New Hampshire last fall. Its members represented every state in the Union. They were all bright, intelligent men, and they brought their wives with them—and I think that is one of the great blessings of the order, that the women have a part in it as well as the men, and therefore I have been a very strong friend of the Grange. At that meeting we gave them an opportunity to see what a northern Yankee is like, and that was worth everything to them. They went away much disappointed to find so much kindness shown them. They could not express themselves sufficiently for the kind treatment they received. We took them up to the mountains, and they had an opportunity to see some of the poorest farms there were, some farms where people have hard work to get a living, and the Mississippi man and his wife questioned how they could get a living. I said, "They get a living by industry. There is more happiness in that farm-house than in any palace." People who get their living by their own hands, and bring up their own family to labor, get the most out of this world; and if we can have as good a home as those people on the hill-sides, we ought to be satisfied.

They said they were glad they came here, glad to have seen something of New England, glad to have seen something of how Yankees live. I like to be called a Yankee. That is what they called us down South, during the Rebellion.

Since I have been connected with the Board of Agriculture there have been great improvements in farming. Look at the dairy interests in this state, and see what has been accomplished within ten years. I do not know how it has been brought about, except by agitation and by getting ideas from one another, by publications, and other things of that kind. Look at the creameries and the improved machinery. When I lived in Grantham, butter making was the hardest of work ; it was all done in the house by the ladies of the house ; now there is no trouble about it, or anything connected with it.

To be good farmers requires more skill than any other kind of business. Farming should be carried on upon business principles. It is not half the work to do business that it was when I first came into New Hampshire, and if farmers will take hold and do the work as it should be done they will make a success of it.

If they are dissatisfied, because they think somebody else is making more money, in the store or somewhere else, they had better quit farming. But there is no way in the world that we can get so much out of life as on the farm. To make the most of life—that is what we are living for ; that is what I have lived for these eighty years. It is a great thing to be obliged to labor, and it is a great thing to have enough to do. I know something about it ; and if I was not quite so old I should be tempted to start anew. It is pretty hard to get up in the morning and have no horse to feed, no cows to milk, and nothing to do after breakfast. And for this reason I enjoy these meetings of the Board of Agriculture, because I can communicate with people and get a great many ideas which are valuable to me.

Since the Board has been organized we have held 826

meetings in this state, and I have attended nearly all. I think somebody must have got ideas from them. For one thing, I think the attention of the people was brought to the fact that they could raise corn cheaper than they could buy it; that one thing has done considerable good. Then the question of silos was agitated, and it has become an established fact with you all. I suppose all practical farmers who have stock to keep have silos. They ought to have them.

One of the greatest difficulties of our farmers is, after they work hard and get a little money, to know what to do with it. Do they put it back on their farms? No, they go and put it in the savings banks, where they have less taxes to pay. I will guarantee that on these hard farms, where you would not think any one could get enough to keep body and soul alive, are men who have considerable money in the savings banks. There is a man in the town of Grantham whom everybody supposed was poor, yet he has a large sum of money in the savings banks at Concord. That is all right. Save your money; but do it by making improvements on your farms. If you can lay out five dollars, or ten dollars, or a hundred dollars on your farm, your farm is so much richer, you are so much richer, and the world is so much richer. Remember that you are a part and parcel of the world, and you are bound, by the life that God has given you, to do your part to make the world better by living in it. Do n't think it is "All for me and my son John." It is for the world that you are working, and in doing that I tell you you will get more out of life than in any other way. I speak from my experience, and you will allow I have experience in life.

We have here with us Mr. T. D. Curtis, agricultural editor of the *Mirror and Farmer*, who will talk upon the subject of "Indian Corn."

INDIAN CORN.

BY T. D. CURTIS.

America has made three valuable gifts to the world. These are the turkey, the potato, and Indian corn. I might add tobacco, but I consider the value of it to be very dubious, to say the least.

My theme for the present occasion is Indian corn. It requires no argument to show the value and importance of this crop, which occupies one third to one half the land of this country that is ploughed each year, and which has given us, and will soon average, over two thousand million bushels annually—an amount more than equal to all other cereal crops put together—without which our immense crops of beef, pork, and dairy products would be nearly if not quite impossible. We might substitute other foods; but what is there with which we could supply the place of our immense corn crop so easily and cheaply, and that would be so satisfactory for general feeding purposes?

Any material diminution of the Indian corn crop we find has a material influence on all markets of the country. Its failure would be not only a national but a world-wide calamity. How, then, to not only avoid such a calamity but to increase the yield of a crop so important in promoting other food industries, aside from its own valuable food properties for the human race, are profound desiderata. The chief aim of my paper will be to contribute what I can to the solution of these questions.

As for New England, which has until recently been considered by many as poorly adapted to corn-growing, it is found capable of producing as high an average number of bushels per acre as any of the states of the Union. During the decade from 1879 to 1889, the average annual product of corn per acre for the whole country was 24.1 bushels, the average price of which was $9.47. The average an-

nual yield in New Hampshire per acre was 32.7 bushels, of Nebraska, 32.8 bushels. These are the two highest yields per acre of all the states, Nebraska excelling us only by one tenth of a bushel. The average value per acre in New Hampshire was $24.32, in Nebraska, $7.58. So the New Hampshire grower got more than three times as much per acre for his corn, if he sold it on the market, as Nebraska did. Is not this a pretty good tariff in our favor?

The average value of corn per acre, for the decade under consideration, was $9.47; of wheat, $9.05; of oats, $8.16; of rye, $8.27; of barley, $12.76; of hay, $11.08. But corn in New England averaged $23.10 per acre. The average in the several New England states was $24.25 in Vermont, $24.32 in New Hampshire, $23.18 in Maine, $22.94 in Massachusetts, $22.98 in Rhode Island, and $20.94 in Connecticut. Why these variations in New England, you know as well as I.

This much by way of encouragement to New England farmers to grow corn. There would seem to be every inducement for them to do so, unless it be cost of cultivation. The yield per acre is as high in the most favored corn-producing states, the average is one third above that of the whole country, and they have greatly the advantage in price. And remember the figures we have given include only the shelled corn. The value of the fodder is for you to consider.

Corn grows over a wide range of climate—from 60° north to 60° south latitude. It is generally supposed that originally there were only two varieties—one found in Mexico and one in New England. But no one knows. Difference of climate and conditions have developed many varieties, from the dwarf of two feet high, or less, to the mammoth of 15 to 20 feet. Scientists are breeding varieties constantly, and it is becoming difficult to make a satisfactory selection, because of their multitude. But one general rule will probably never vary. Select a variety that will ripen between

late frost in the spring and early frost in the fall. Some say frost-bitten silage, if not bleached by rain or dew, is just as good as that not touched by frost. Those who like can believe this, or as much as they choose.

In selecting seeds, be sure to get that which is thoroughly ripened and vigorous. Very much depends on this. The seed must contain not only force enough to germinate, or even come to the surface, but must have the vigor to carry on the developing process to full fruition. Immature or injured seed cannot result in the best possible crop; and it is safe to assume that some varieties of corn, like some breeds of animals, are not sufficiently fixed in type to breed true to it under all conditions.

Corn, happily, is not particular as to soil. It grows in all kinds, if not wet or too dry, provided they contain the requisite amount of the right kinds of fertilizing elements, and it is not particular as to the condition of the fertilizers, so they are soluble. It will feed and thrive on the grossest and on the most refined. It is a gross surface feeder, and must have the food within the reach of its roots. It must have nitrogen, potash, and phosphoric acid, no matter what else may be in the soil.

One of the most important things in growing a corn crop—or any other crop—is the preparation of the soil. The unfitness of the seed-bed has ruined many a crop. Rather it has wasted labor and prevented development of a crop. All plant food, to become available, must be dissolved, so that rootlets can take it up in liquid form. To be soluble, all solid elements must be made fine. The finer, even to reduction to an impalpable powder, the more rapidly it is dissolved by rains and carried to the absorbent vessels of the roots, which take up the enriched liquid and send it on its way through the plant, to build up its structure in accordance with the laws of nature.

Another point common sense suggests. The fertilizer must be put where the growing roots can reach it, or it can

reach the roots. The roots never run deep. The moister the season, the nearer the surface they run. If the fertilizer is below their depth, they can never reach it nor it reach them—except perhaps some of the enriched moisture may be drawn up by capillary attraction. If the fertilizer is put in the hill, it feeds the plant in the start; but when the roots grow beyond the hill, what are they to feed on, if the soil beyond is not charged with food elements? Plainly, reliance for the future sustenance of the corn plant should not be on manuring in the hill. The soil generally must be made rich with plant food.

We cannot place too much stress on the pulverization of the soil and the making of a mellow as well as of a rich seed-bed. I believe the crops of this country could be economically doubled per acre by paying more attention to the preparation of the soil for the seed. Less fertilizing material would be needed, as a larger proportion of it would be rendered immediately available. It would save one half the soil now required to produce the same amount of product, and I am sure it would not double the amount of labor. No more labor, but less, for a given amount of product, would be required in cultivation; for a thoroughly prepared seed-bed would dispense with half the future need of cultivation. Intense farming not only pays but pays best.

The depth to which the seed-bed should be prepared must depend upon the depth to which the roots of the crop naturally grow, and there must be at least drainage enough below to prevent the roots from touching standing water. Corn does not require a very deep seed-bed, but it does require a well-pulverized and mellow one. You can't make it too mellow, and it is hardly possible to make it too rich, if the supply of fertilizing material is properly balanced. It is a waste of labor to bestow it on poor soil badly prepared.

All things considered, and the soil properly drained, flat culture is the best for corn. It is also the easiest. In hills $3\frac{1}{2}$ by $3\frac{1}{2}$ feet is a proper distance between them. In drills,

the rows 3½ feet apart and stalks about 12 inches in the row, is not far out of the way. In either case, three stalks in a hill or three stalks to every yard in the row, are enough—unless we except some of the smallest varieties, which might be planted a little closer, or some of the larger, which should have the hills four feet apart.

No matter whether you plant for a crop of shelled corn or for a crop of fodder or silage, plant the same. The distance most favorable for the full development of the ear is the most favorable for all purposes. There is nothing gained by crowding any crop, but much less in crowding the corn crop. Many in times past, and a few now, have imagined that corn sown so thick that it will not grow a stalk more than one-quarter the ordinary diameter, and no sign of an ear will set on it, approaches the quality of timothy hay, as the stalk approaches it in size. No greater mistake was ever made. The stalk of such fodder corn is nearly worthless,—no better than dead-ripe wheat straw. There is very little in it but wood and water, and the lower half or third of stalks grown in this way is not as good as brush cut green in the forest and fed to cattle. Immature corn, grown in the best way, contains but little nourishment, as has been shown hundreds of times by careful analyses. Unlike the other grasses, there is little nourishment in corn during the first stages of its growth. It must have plenty of air and sunshine and go through the process of laying up material for the formation of its seed, before it contains much food value. But cornstalks grown so thick as to remain at the bottom in perpetual shade never store up nutritive material for any purpose. They are as nearly worthless as anything that can be grown. When I ride through the country and see places of fodder-corn growing as thick as hair on a dog, it awakens sympathy for the poor creatures doomed to eat it, and sympathy for the man who at this stage of enlightened teaching has not found out that such fodder is the poorest stuff with which he can torture a

poor animal with the mistaken idea that he is giving it food. It is materialized starvation.

Corn needs very little cultivation in one sense, and yet a good deal in another. If the soil is properly prepared and free from weeds, as it should be, there is no need of harrowing it as soon as planted, unless there has been rain and the surface has become baked, so that it is partially impervious to air. At no time does more than an inch of soil need to be stirred, and that only for the purpose of killing weeds and keeping the soil open, or to prepare on the immediate surface a mulch of fine dirt to prevent rapid escape of moisture by evaporation. More stirring than this is injurious, and the soil should be so thoroughly prepared as to require very little, if any, cultivation to keep down weeds. Early harrowing of course disturbs weeds and is liable to more or less disturb the corn plant and injure it, but of course it opens the soil and lets in the air. But this can be just as well done without disturbing the corn. Properly planted at the right time, the plant will show itself in a week, and in ten or twelve days the rows can easily be followed and will permit of shallow culture by the cultivator. Do n't go over an inch deep at any time. It does no good to tumble the surface of the soil back and forth, first from the row and then into it. It only helps dissipate moisture. Let it alone, unless the soil is baking on the surface. Then open it with the cultivator. Or unless the soil is getting very dry; then stir it enough, just on the surface, to check evaporation.

Besides injuring the roots of the corn and otherwise interfering with the processes of nature, there is another reason, not generally considered, why there should be no deep movement of the soil. This is the disturbance that it gives to the natural circulation of the moisture in the soil. The circulation soon establishes itself after planting, and should be let alone. Every time it is disturbed the moisture has to seek out new channels of circulation; and these are no less for the moisture that is descending because of excess,

than for that which may be drawn upward through the soil by capillary attraction,—a process which is aided in dry time by keeping a mulch of pulverized soil on the surface.

This circulation of the moisture in the soil is a subject not yet fully investigated, but in the last few years it has been undergoing scientific examination. But enough has already been ascertained to show that it is of very great importance,—and in no case is it more so than in growing a surface feeding crop, like corn. I believe the time will come when most of our cereals will be grown in rows and receive shallow cultivation for the purpose of keeping a soil-mulch between the rows, and of opening the soil when it bakes and excludes the air after a rain.

This moisture and air circulation in the soil is a mutual affair. The warm blanket of mulch-earth aids in drawing the moisture towards the surface, while opening the dried surface permits both air and moisture to descend,—for wherever moisture goes, air goes with it. We must have both. Nothing can grow in a soil that is impervious to air and moisture. A soil without the circulation of both these elements is stagnant and dead. Nothing can grow in it; nothing can live in it.

Weeds draw moisture from the soil and choke the crops. So far as the fertilizing elements are concerned, they return when they decay as much or more than they take. They injure the crop more by robbing it of moisture than of fertilizer—although some fertilizer is used by the weeds, to be returned again. Weeds must therefore be kept down. In preparing your corn ground, prepare the way for the annihilation of the weeds without disturbing the corn. Don't count on growing a heavy weed crop to be fought down all summer among your corn. Plow in season, sprout as many weeds as you can and destroy them with the harrow. Don't allow weeds to ripen their seeds on your farm, then plant them on your corn, grown through the manure applied, and thus grow up an enemy to injure your crop and

make a slave of you. Kill the weeds. That is the first business in easy and successful farming.

The weeds disposed of, you have only to look after the conditions necessary to secure the proper circulation of air and water through the soil. This is all you need to cultivate for, and all that needs looking after when your seed-bed is properly prepared and your corn planted.

I know this will look somewhat ideal and fanciful to most if not all of you. But it is not so difficult as may at first appear. Once accomplished—once you have annihilated the weeds, nearly or quite all of which have no business on your cultivated lands—farming will become simple and easy compared with what it is now and your crops per acre doubled. There is a reward to be reaped as well as a work to be accomplished.

I will not touch upon the disposal of the corn crop after it is grown. Get it in the easiest way and without waste. You will each be your own judge as to the best way for you.

And now let me close with a sentiment, which is substantially what is said to have been found on an old English drinking cup:

Let the wealthy elate
Roll in splendor and state—
I envy them not, I declare it;
I eat my own lamb,
My chickens and ham,
I shear my own fleece and I wear it.

I have lawns, I have bowers,
I have fruits, I have flowers;
The lark is my morning alarmer;
So jolly boys, now,
Here's God-speed to the plow,
Long life and success to the farmer!

MR. MANN: I am in the habit of going to meeting, and sometimes I am in the habit of going to sleep; but when I hear good preaching I always keep wide awake; and I must say, I have heard one of the best lectures about corn raising that I ever heard. The speaker says you must select good seed in order to raise a good crop. I think our worthy secretary was remarkably lucky in selecting good seed for this speech. I think the best seed has been selected, and I think it has been sown, and I think if we follow the precepts of the worthy speaker we will have good crops.

When we first came I thought we were going to have a very poor meeting by the looks of the house. But when I look it over and see the people, and consider the reception we have received from the worthy master of the Peterborough Grange, and the worthy reception we have received from the choir, and the reception of the speaker, I think it is the best meeting I have ever seen. I think the Peterborough people have made a mistake. They have led us into temptation, and we shall come again. Thanking you, ladies and gentlemen, I wish to hear from others on this occasion.

DR. TOWLE: I want information in regard to the seed of corn we should use. My fellow-farmers all know that for the last twenty five-years in every other branch of industry that you can mention there has been great improvement; but corn has been corn and is corn today. We have many varieties, and when we choose, we simply choose from the outside appearance. Is it possible for us to breed a species of corn as we have bred a species of cows, species of horses and species of other domestic animals that we have bred for a certain purpose? Is it possible for us to breed a species of corn that will serve us in a capacity of corn a great deal better than that in which we have been indulging? To put my question more pointedly, it is this: As near as I can ascertain from what practice I have had in raising corn, this ear, of which the president has made mention, when it comes

out, if you open the husk, you will see a certain number of receptacles—I am going to call it by that term for the want of something better—places where the corn is to grow. At a certain period you will find that each one of these receptacles is provided with a thread of silk, and if you trace it along far enough, you will find, in the course of time, that after the blossoms come out a blossom falls on this thread of silk. Unless one of these blossoms hits the silk that goes to a certain receptacle, you do not get any corn. I want corn that has sixteen rows of kernels, that has a small cob, with ears twelve to fourteen inches long. Here comes up this difficulty that Brother Curtis has referred to: It will not mature. I want to get a species of corn that will mature with us farmers. Suppose I take a corn that has an ear that just suits me,—twelve to fourteen inches long, sixteen rows, and a corresponding number of receptacles. Instead of allowing the blossom of that stalk to fall upon this stalk I take those tassels off and plant beside it an early corn, that is sure to get ripe, and I allow the blossoms of that corn to fall upon the silk of this, will I get a corn that is a foot in length, with sixteen rows and that will be an early corn? If so, we can improve our crop of corn with just as much ease and just as much certainty as we have improved the dairy cow, the trotting horse, the breed of horse, or anything else that we have had to deal with on the farm. I have not experimented to the extent that I know this can be done. It seems to me like a physiological fact, and it strikes me that in the next decade that there is going to be more attention paid to this and more benefit obtained for the farmer than any other way of raising corn.

Mr. Curtis: I think the theory is entirely correct; but you will have to continue the process for a number of years, and it will reduce somewhat the size of the stalk—that is, it may not be as large as the original. It may be that by constant experimenting you will reach the point you desire. There are those who are working upon that. I have never

experimented with it myself, but I have read a good deal about it. Some are very sanguine of improving very much the breed of corn and increasing the number of ears. In New England you will have to use the Flint. I do not think the Horsetooth you can make live for your purpose. You will have to use the Flint on both sides. In the West they will use the Horsetooth. They breed other things; they breed potatoes; they breed other vegetables on the same principle as they do animals. The first year your crop will look like the original. They show only in the second year. That is what they say. A long, tedious, patient series of experiments is required.

Professor Hersey: If I am allowed to say a few words, I can speak on the work under discussion. My father accomplished just what seems to be desired the present day fifty years ago. We occasionally had a season when corn did not ripen and it was difficult to get a variety that was early. We did not at that time have what is called the Early Canadian corn. His first effort was in a wrong direction. He tried to do two things at the same time. He tried to get two or three ears to grow on a stalk, to get large corn and early corn. He found that he was able to get the number of ears, and the trouble was too many of them, and they were not ripe. It also increased very much the expense of husking. Then he started again and pushed in the direction of a large early corn with a small stalk, and that he accomplished. I am sorry to say that that seed was not preserved. He got a variety of corn that was better than any that was grown at that time in that vicinity, and always had his crop ripe.

There is no question in my mind but what you can get almost anything that you start for, if you do n't start for too many things at once.

While I am up I wish to say a few words with reference to the application of fertilizers for corn. There can be no rules laid down. We have the soil to deal with, and there

are hardly two places where the soils are alike. Every farmer must become wise of himself in regard to what he shall put on his land to fertilize his crops. I had the idea some years ago that I knew pretty well what my land wanted without testing it. I had that poor sandy land which you speak of, that is good land to raise corn on. But let me say to my friend who recommends clover, it was not good land to raise clover on. It would not grow there. I wanted to raise corn and I did. I raised corn on it—not much more than sixty bushels to the acre, however—sometimes I got sixty-five bushels. And that paid, on that land, simply because it was easy to grow it. I believe that it could be kept in corn year after year, with commercial fertilizers. Where you make a mistake in attempting to raise corn year after year with commercial fertilizers, is in not furnishing something in the shape of clover—or if you cannot raise clover you can raise rye. On my land I can raise a crop year after year, with commercial fertilizers, by supplying the vegetable substance by winter rye.

And here let me say that this is one of the best things that a farmer can do who has this light land, land which requires something of that kind, after the corn is gathered. Sow rye and plow it in the next spring. In this way I believe you can go on year after year, for fifty years, and raise good crops.

In regard to the different proportions of the elements of plant food which you must apply for a crop of corn: Here you have some trouble, for it depends upon your land. I had supposed that my land, being light and sandy, required considerable potash. But after several trials I began to think it was a mistake; and I went into a series of experiments to ascertain what my land needed, whether it needed potash, nitrogen, or phosphoric acid. To my utter astonishment I found it did not require potash, that I could put on ground bones and there would be nitrogen enough produced to get crops, and I found by applying thirty dollars worth of

ground bones to the acre I could get satisfactory crops, depending upon the condition of the soil. One strip which I tried experiments on ran across a few rotten stumps, and where they touched those rotten stumps I got seventy-five bushels of corn to the acre, showing what decayed roots of trees will do for the production of corn.

We have got to keep our eyes open to our own fields. While we may gather some general facts from those who try experiments, we must confine our work simply around farms. As we go abroad we may gather some few general facts and carry them home, and there we may apply them to our farms; but I would urge upon every farmer who is making farming a business, the importance of learning what his own soil will produce, and learning the very best way of producing any particular crop on his particular soil. The farmer must not pin his faith on any man's sleeve, but he must be wise of himself.

MR. CURTIS: I believe, as Mr. Hersey says, that every farm should be an experiment station. I would like to ask his opinion as to whether or not, in putting on the bones, he did not supply the lime I spoke of which was needed to perfect his crop. He applied phosphate of lime.

PROF. HERSEY: Of course, phosphate of lime.

MR. CURTIS: In increasing the number of ears, was not the tendency every time to reduce the size of the ears?

PROF. HERSEY: I suppose it was somewhat. In regard to the lime, I would say that a great many experiments have been tried on my farm, and it has always been a failure when applied in its pure state. But I have no doubt but in the condition in which it is in ground bones it might have been of advantage. It is evident enough to me that my land lacks phosphoric acid.

A MEMBER: If your ground is so poor that it wouldn't grow clover, would it grow from sixty to sixty-five bushels of shelled corn to the acre?

PROF. HERSEY: Yes. When I plowed it up at first it

was so poor that you could hardly call it grass land, and there was good mason sand within three feet of the surface.

A MEMBER: In relation to this crossing of corn—over at Concord, our old friend, the colonel, who died a few years ago—

PROF. HERSEY: Captain Moore.

A MEMBER: Yes. He found the market was supplied with sweet corn, a portion being altogether too large and another too small. They sold it by the dozen. The large corn did not look very well with the ears broken, and the small corn they did n't want to buy because it was not big enough. By crossing the two, I think for about two years, he told me he produced that corn that went by the name of Moore's Early. He succeeded completely in that experiment.

I wish to say one more thing in relation to potash. The way we apply potash is usually by way of ashes. I have seen some farms that you could not tell where you put the ashes. You might put them all over and over again and they never produced any results; while in that immediate vicinity, on other farms, ashes would make the best of all fertilizers.

MR. CURTIS: I came to the conclusion some time since that even sandy soils differ. An article, I think it was in the *Country Gentleman*, written by Prof. Henry Stewart, placed great emphasis on the importance of lime. It seems to me that on his Jersey soil this was just what he wanted.

THE PRESIDENT: The meeting now stands adjourned until this evening at 7:15 o'clock.

EVENING SESSION.

THE PRESIDENT: I now have the pleasure of introducing to you Edmund Hersey of Hingham, Mass., connected with Bussey Institute of Harvard University, who will speak upon Cranberry Culture.

CRANBERRY CULTURE.

BY EDMUND HERSEY OF HINGHAM, MASS.

In selecting a bog on which cranberries are to be grown with success, good drainage is of the first importance; the second is sand, or fine gravel, near the border of the bog, and the third is a good supply of water that can be controlled at all seasons of the year. Without good drainage, whatever may be said to the contrary, the cranberry cannot be grown with success; in fact it will not grow at all in the water; water is of value only while the plant is at rest, except to destroy insect enemies, or to prevent injury by frost. Because the cranberry grows naturally where the land is wet a considerable portion of the year, the conclusion is drawn that water is essential for its growth; but a careful examination will disclose the fact that where the cranberry grows well naturally, is on bogs where the water flows above the surface only during the season when the vines are in a dormant state, and that before the vines begin to grow the water is from three to ten inches below the surface; and also that good drainage is secured by moss and a network of the roots and runners of the vines. It is a fact that is now well known by cranberry growers, that cranberry vines grow best on thoroughly drained land with the water ten inches below the surface; one of the principal advantages of applying sand is quick drainage after a sudden shower. On many bogs success without sand would be doubtful—in fact, impossible because of the want of quick drainage of the water from the surface after a summer shower; it requires but a very short time in mid-summer for surface water to destroy a crop of cranberries. Sand is also applied to keep the grass out and furnish heat to the growing vines and fruit; while a vine will frequently grow four feet the first year after it is set, if set on sand where the drainage is so good that no water will stand on the sur-

face after a heavy shower, it will not grow six inches if set where the drainage is such that the water will stand in pools half a day after every shower.

Water is important for success in cranberry growing only when it can be fully controlled. The bog should be covered with water from November until May, and during the extreme cold weather it should be covered deep enough to prevent the ice from reaching the vines. The water should be let on gradually in the autumn, and drawn off gradually in the spring. While as a rule the vines should be fully out of the water by the middle of May, it should be left high enough to keep the ditches full until all danger of frost is over, and the ditches should be again filled early in September to prevent the frosts from injuring the fruit.

In whatever business a man is to make much success, he must not only have all the conditions favorable, but he must make himself acquainted with all the details of the business—in fact, make himself master of it. This applies to growing cranberries quite as much as to any other business.

If you have a bog that cannot be easily drained, or has no sand or gravel near it, or has not plenty of water at all seasons of the year that you can fully control, then you had better not waste your time and money in trying to grow cranberries for market in competition with those who have all the conditions favorable.

But if you have a bog, or can buy one at a reasonable price, which is well adapted to the growth of the cranberry, then you need not hesitate to engage in the business, if you will give it attention enough to learn the details of the best method of building a bog and caring for the vines and fruit. Having secured a bog, the first work is to drain it; if it be a deep one that has never been drained, allowance must be made for settling after it is drained. It is safe to allow for settling eighteen inches, if the outlet is to be lowered three feet below the level of the bog; this will give a chance to

draw the water eighteen inches below the surface after the bog has settled.

In digging the ditches for drainage, the main water-course may be through the centre of the bog; but there should always be a ditch between the bog and the high land to catch the water that runs from the high land which surrounds the bog, as illustrated on the chart. Having thoroughly drained the bog by lowering the outlet and the main drain, and by cutting off the water that comes from the surrounding hills, the work of clearing the bog may be commenced; always beginning on the side or end next to the outlet and working back acros the bog at right-angles with the main ditch, so that as the work advances a cross ditch may be dug every seventy-five feet and thus keep the bog dry enough to work comfortably.

A bog which is underlaid with peat is easily cleared though it may be covered with bushes or trees, as the roots will not enter the peat. If the trees are more than six inches in diameter the trunks had better not be cut from the stump until after the stump has been tipped over, using the trunk as a lever. On a bog covered with wood or brush, everything not of value for wood or timber should be burned up on the bog. The brush and stumps should first be piled up in long piles; and on these should be put the soil that is above the peat, which in a few weeks will be dry enough to burn. By thus disposing of the soil much labor is saved and a large amount of valuable ashes is obtained.

The bog should be made as nearly level as possible, by digging the cross ditches from the shore ditch to the main ditch; the water in them will be a good guide to go by in keeping the level, if it be kept back by a dam across the outlet of the main ditch. These cross ditches should be about two feet wide at the top, sixteen inches at the bottom, and eighteen inches deep.

In sanding, if the bog be large, a portable railway should be used, which I have illustrated on the chart; the rails are

made of 2 x 5 joist set two feet apart and fastened together at each end and in the middle by spiking them to joist of the same size as the sides and sawed the proper length.

To keep the track from settling into the peat, boards eight inches wide and three feet long are nailed to the under side of one end and middle of each section of the track, the board at the end being nailed so that one half the width of it projects over the end, leaving room for the end of the next section, which has no board on it, to rest on. The sections are joined together with an iron, made to clasp the two ends of each section together. A track thus made in sections of sixteen feet in length can be easily moved to any part of the bog. A car is made to run on this track that will hold about as much as a one-horse cart, and is moved on the track by two men ; it tips sideways and is very easily unloaded.

The bog should be covered with sand about three inches in depth. Before the work of setting the vines is commenced a dam at the outlet of the bog should be built high enough to flow all parts of the bog at least three feet in depth, and the flume should be so constructed that the water can easily be raised or lowered to any level desired.

The vines do best set in April or May, but may be set at any time during the growing season, and will live but will not grow very much until the following season if set after the last of June. In regard to vines for transplanting, my advice would be, do not buy vines where the insects are at work on them, but rather get the best natives you can find, and the best are those which are of good color and thick flesh ; a cranberry that has a thin flesh, large cavities, and large seeds, should be rejected, whatever may be its color ; but one with a thick flesh, small cavities, small seeds, and dark color is desirable, wherever it may have originated. Many of the varieties that have been put on the market are not what is desirable. A thin flesh, early variety, or a very

large berry, should be avoided. Cranberries growing on a natural bog, where there is no sand under them, never grow so large, nor so thick in flesh, as those growing on a well-drained bog covered with three or more inches of sand; therefore, unless one has tested a variety, he cannot be certain what its value may be.

It is much better to have a light red berry which has a firm, thick flesh, and will keep well until May, than to have a very dark red berry that has a soft thin flesh, and will not keep well after December. Fruit of this latter description has been sold the present year as low as four dollars per barrel; while the thick, firm-flesh fruit have been sold for ten dollars. The illustrations on the chart show the different forms, and also the difference in the thickness of the flesh.

Very few set vines with roots to them, but cut them off close to the ground and set the tops, three or four in a place. This practice, I believe, is wrong; they make, the first year, not more than half the growth which vines that have roots will make. A root well set will frequently make a growth of four feet the first year, while a top with the same treatment will not grow more than two feet.

To prepare the land for setting, after the sand is evenly spread, make an implement in the shape of a rake, with the head five feet long; the teeth should be an inch in diameter and eight inches long, inserted in the head ten inches apart; this should be dragged over the sand to mark for the rows of vines, making marks as you see on the chart. The vines are set singly, ten inches apart in each row, and the rows being ten inches apart, each vine occupies a space of ten inches square; this is much nearer than most growers have been in the habit of setting them; many, in years past, have set two or two and one half feet apart, but they are learning gradually that it is better to set nearer. For forty years I have practised setting from six to ten inches apart, and if I have plenty of vines I prefer six inches; but if a good

growth is secured, the ground will be covered the second year at ten inches.

Boys and girls are employed to set the vines, the work being done with a stick which has a notch cut in the end of it, pushing the root down through the sand to the peat below; this work can be done quite rapidly. While the vines are being set, the water should be kept up to a level about six inches below the surface, but after the first of July, unless it be very dry, it should be drawn ten inches below the surface.

If, during the first year, any round grass, or hassock grass, should make its appearance, it should be pulled out, and this should also be done in the second year. After this, if the bog is what it ought to be, and the work has been properly done, there will be but very little labor required to keep the grass out, and only the bushes will have to be looked after. I am aware that there are a large number of bogs that require constant weeding, or the grass will overrun the vines; but this is because the bogs are not what they should be for the profitable growing of the cranberry. I have a bog that has been in cranberries sixty-six years, and without any effort on the part of the owner, the cranberry vines have kept the grass out so well that more than forty barrels to the acre were gathered the present year. Never buy a bog where the cranberry will not grow well enough to conquer the grass after the first two years.

When the vines have been set two years a reservoir of water above the bog is desirable, and it should contain sufficient water to fill all the ditches at any season of the year, and in the spring and autumn enough to cover the vines.

The elevation of the reservoir should be such that the vines can be covered in twenty-four hours; but as a rule only the ditches should be filled; it is never safe to cover the fruit with water, and the vines should not be flooded after the first of June, except to kill insects, and even then only a few hours at each time of flooding.

Any ordinary frost may be prevented, either in spring or autumn, by raising the water up to the surface of the bog. A bog that is well adapted to the growth of the cranberry requires but little outlay after it has been set two years, except to keep the ditches open, the bushes out, and the water at the proper height during the different seasons of the year.

The harvesting of the crop is an expense which can always be met by the sale of the fruit, and leave a large margin for profit.

To gather the fruit in a systematic way, lines are drawn across the meadow, about four feet apart, thus keeping the pickers separate, each gathering within the lines which mark out the space assigned to him.

Each picker is furnished with a tin pail holding six quarts, and the price usually paid is ten cents a pail. When each pail of berries is carried in, the picker receives a dime, or a check representing that amount, and when ten checks are obtained they are exchanged for a one-dollar check which every Saturday night is cashed by the owner of the bog or his representative. Some pickers frequently make from two to two and one half dollars per day, and quite small boys and girls one dollar per day. If the fruit is to be sent to market at once, it should be screened, picked over, and barreled as fast as gathered from the vines; but if it is to be kept until winter to secure better prices, a building should be built that can be easily kept from freezing in the coldest weather.

To keep the cranberry well, an even temperature is important; and for this reason, a storehouse should be built with double walls filled between with dry sawdust. Never try to keep cranberries after the middle of November without having a properly constructed building to store them in.

As a rule it is not best to screen or pick over the berries until they are to be barreled and sold. In barreling press the fruit in with a screw made for the purpose; to send

cranberries to market when they will rattle in the barrels is fatal to their keeping qualities.

My experience is that the best way to keep cranberries for the winter market is in bins about twelve inches in depth ; but many prefer to keep them in crates made of laths, holding about one bushel each ; but if one has several thousand bushels the cost of crates is quite large, for to make good ones will cost from twelve to twenty cents each, and the expense of filling them is more than the expense of placing them in bins.

It requires quite as much skill, and better judgment, to keep cranberries in the best possible manner and sell them at just the right time, as it does to prepare the bog and grow the fruit.

It is never safe to strike the balance sheet to ascertain the profits until the crop is sold and the money is in your pocket. But the crop is usually a profitable one to those who have a good bog, and possess sufficient intelligence to manage the business as it ought to be.

In conclusion, I would say, do not rush into the business until you make yourself familiar with the principal wants of the crop ; be quite sure that you have the right kind of a bog for the business ; then the mistakes you make in preparing it can be corrected : but if your bog is not right, you will always work at a disadvantage, and can never make much of a success.

A Member : What do you think about our seasons being shorter,—earlier frosts and later frosts ?

Professor Hersey : I admit it. But I apprehend your cranberries will grow almost as much quicker than ours as there is difference in the seasons. I suppose you well know that any fruit that can be grown to full perfection, the further north it is the better it is. If you have these favorable conditions, where you can command the water, I believe you can get your cranberries ripe ; and therefore, in order to be

sure of it, I should recommend you to take your own vines that have been acclimated, and they will probably ripen earlier than ours.

A MEMBER: How about the expense of an average bog?

PROFESSOR HERSEY: The average expense of a bog is from three to four hundred dollars per acre. My home bog did not cost me anything. You will wonder at that.

A MEMBER: I have heard tell about stealing meeting-houses, but not bogs.

PROFESSOR HERSEY: I did n't even do that. I picked a favorable locality. I made a favorable bargain when I bought the land, although I paid all the man asked for it. I bought it cheap enough so that I cut off the wood, which made me two hundred dollars on the stump. All I had to do was to pay the man for cutting, and the man who bought it took it from the bog. It was a maple swamp, and I took off the top, which was almost, if not quite, equal to barn manure. That I sold on the edge of the meadow for a dollar and a half a cord. With the selling of the top of the soil and the wood, I got money enough to pay for all the labor of repairing the bog, setting the vines, and weeding. By the way, a little weeding must be done the first two years. If you have the right kind of a bog, I do not think you need to spend much time in weeding. If you set them ten inches apart they will cover the ground by the second year. If you set them thirty inches apart, as they formerly did on the Cape, you must expect a good deal of labor. They have got down there to fourteen inches. They will finally get down to ten inches, I presume.

MR. MANN: Have you any knowledge of cranberries growing on mountains?

PROFESSOR HERSEY: Little low bushes?

MR. MANN: On Moosilauke they grow right on top of the mountain. They are not more than a third part as large as those you raise on the bogs.

PROFESSOR HERSEY: What is the flavor?

MR. MANN: You would not know the difference in the taste between the large and the small.

PROFESSOR HERSEY: I never happened to be where they were ripe. I have seen them.

MR. MANN: It is on top of the mountain. I have in my front yard a cranberry bush. The berries are of the same flavor as those that grow in the bog. There is one tree on the Haverhill road from which you can pick nearly a bushel.

A MEMBER: But they have very large seeds.

MR. MANN: Yes; they have big seeds.

PROFESSOR HERSEY: I cannot speak of any other varieties than mine.

THE PRESIDENT: How much profit do you get off of an acre?

PROFESSOR HERSEY: It is very easy to reckon the profit of a cranberry bog after you get the money in your pocket, but it is pretty hard to reckon it before. You are never certain what you are going to get for the cranberry crop until you have sold it. You can figure it up just as well as I can. It costs to pick a barrel, and the expenses of marketing and shipping, and the commission, not a great ways from three dollars. Fifty barrels to an acre would be a very large crop. If you get six dollars a barrel, you would get for fifty barrels, after paying expenses, a hundred and fifty dollars. That does not include taxes.

A MEMBER: How much do you consider that bog of four acres which cost you nothing, is worth?

PROFESSOR HERSEY: I do n't know. I should not want to set a price on it. You can see very well that it will pay the interest on considerable money. I will say this much—a thousand dollars per acre would not buy it.

MR. MANN: I did not understand the manner of gathering them.

PROFESSOR HERSEY: They are picked by boys, girls, and women. It costs ten cents to pick six quarts.

MR. MANN: I have heard somewhere that they pick them with a little fine-toothed rake.

PROFESSOR HERSEY: Yes, they have pickers which do not cost half so much, and if you do n't care anything about the reputation of your cranberries you can pick them that way. But if you are going to raise cranberries year after year, and want to get your name up as one who produces a good article that may be relied on, then pick by hand by all means.

A MEMBER: A gentleman is anxious to know how soon you will get a crop after setting ?

PROFESSOR HERSEY: You will get pretty near a full crop in the fourth year. You will get considerable many berries in the third.

THE PRESIDENT: I now have the pleasure of introducing Hon. D. H. Goodell, of Antrim, ex-governor of New Hampshire, who will address you upon the "Agriculture in New Hampshire."

AGRICULTURE IN NEW HAMPSHIRE.

BY HON. D. H. GOODELL.

Ladies and Gentlemen: About a week or ten days ago I was in Boston, and saw in some of the Boston papers that I was to speak here upon "Agriculture in New Hampshire." I knew that I must be here, for I knew my man ; and when I observed the subject upon which I was to speak, I knew that he knew his man, because he knew my ability to scatter, and my inability to confine myself to any particular subject. He gave me the great broad subject of "Agriculture in New Hampshire," as broad as the whole state, and it is almost impossible for me to get away from it, no matter what I am talking about.

Fifty years ago or more, we used to think, those of us who thought much about it, those who were thinking at that time and those that were before us, that New Hampshire was a

great agricultural state. I remember when I was just a little fellow, that my grandfather thought that the corporations just started in New Hampshire at that time (one at Peterborough), would ruin the state, because they were going to monopolize everything. He was very much afraid of monopoly, and in his opinion agriculture was the great, the abiding, the only, thing that was worthy the consideration of the state. People came in here from outside, they came from abroad, and they thought that New Hampshire, Vermont, and Massachusetts were the equal, if not the superior, as agricultural states, to any other place that could be found in the broad country. They knew but little of the West. It was after that, when the railroad trains were steaming out into the western prairies, that they began to hear that there was a country which some thought was even better than New Hampshire for agricultural purposes; and by and by it came about that people began to think that there was no such thing as being prosperous on a New Hampshire farm. Why, twenty-five years ago our boys and girls were all running away from New Hampshire into Ohio and the broad prairies of Indiana and Illinois, and some to the great forests of Michigan; and they were scattered, and our population in one decade ran down in numbers instead of increasing, simply because our fathers and our mothers, and our brothers and our sisters had come to the conclusion that New Hampshire was not a good place for agricultural purposes, and that it was of no use for their sons and daughters and their friends to stay here in this cold, bleak, hilly, stony, rocky New Hampshire. So they scattered off, and scattered off. The Irish came in, the French came in, the Germans came in, and filled up in some degree our manufacturing towns and cities, which began to grow; and the farms began to be depopulated, neglected, deserted, abandoned. And so it came about that in one of these years, a little while ago, some of us began to think that something ought to be done, that we were all going to manufacturing, that

the state would be deserted pretty soon, unless we were active in bringing our people to feel that there was something worthy of them even on those New Hampshire farms. So this man went about the state, and he cried out with a clarion voice that everybody could hear, not because they ought not to be abandoned, but simply because people had false notions with reference to these things, and they had gone off to places which they knew not of, and were beginning to return and come back here. Many of those farms which were deserted, have been, through his influence and the influence of those who assisted him, reoccupied, and agriculture is waking up again in New Hampshire almost, as I may say, as it never did before.

"Agriculture in New Hampshire"—why, it is just what our fathers thought it to be fifty years ago. This is the place for the farmer, here in New Hampshire. Why? Because he is successful here. Success! And success means gaining something; it means the accomplishment of purposes; it means rising above our former position, and occupying a higher and nobler place. Success! It does not mean the occupation of vast prairies alone. It means the occupation of smaller places; it means something that fills the pocket, and gives us carriages, and gives us a competence, carpets our houses. Success! it has come to New Hampshire already, and we are in the enjoyment here, in agricultural towns and places, of more success and more comfort and more blessings than on any other favored spot in this our glorious country. Do you believe it! Ah, you do not believe it. You think that after all this is a delusion; you think that after all this is a grand state; you think that the secretary has placed me up here to boom New Hampshire. Ah, yes, I have no doubt that is his purpose; and I am glad to be here, and if you call me a boomer, all right; I am a boomer for New Hampshire, and I want you to join with me, and stand up for this grand old state of ours.

I wanted to know something about the success of New Hampshire ; so a few days ago I wrote to the state treasurer to get some information about the matter, to see whether my ideas were correct,—whether New Hampshire was really successful as an agricultural state. I had believed it for years ; I had become satisfied that what I have said to you is true. Let us see who are the successful men of this state. Why, examine such of the records, such of the statistics, such of the facts as we can get hold of—that will show us who are the successful men and women of New Hampshire in a financial point of view.

We cannot tell you how much money these farmers have invested in stocks, how much in bonds ; we do n't know how much they have got invested in mortgages on real estate in the West and other places ; but we can tell something about how much they have in the savings banks in this state. Let us see whether agricultural districts are richer or poorer than towns and cities where manufacturing is carried on. You say, of course, that the manufacturing man is the man who gets the money ; the mechanic is the man who gathers in from day to day, and week to week, his large earnings ; the merchant is the man who is piling up his gold mountain high ; but the poor farmer lives out on one of these back farms ; he is struggling from day to day, and from week to week, that he may barely get a subsistence for himself and family. Manchester is the great city of this state ; it ought to be the standard to which we look to see whether manufacturing pays or not. In Manchester they have an enormous amount of money in the savings banks—almost eight million dollars—$176.99 to every man, woman, and child. What an enormous amount. Let us see how it is with the city of Nashua. They have more in Nashua than in Manchester—$206.36. Well, if the farmers were as well off as that, if the country towns were as successful, if they could show such a large amount per capita as this, then we would have a right to say that the farmers are, after all, as

successful and as prosperous as the manufacturers, and the merchants and the lawyers who inhabit our towns and cities. But how is it? Why, the little town of Troy, over here, has $161.71 per capita. That is not so much as these cities. Is that the best? Here is Westmoreland, which has $309.27—a purely agricultural town. That town, so far as I know, has no manufacturing. That is as purely an agricultural town as can be found, and it has got more money per capita in the savings banks than the cities of Manchester or Nashua. Surry has got $308.32 in the savings banks. Here is the little town of Nelson, close by here, with none of the advantages of a railroad town, yet it has $355.83 in the savings banks, per capita—almost exactly twice as much per capita as the city of Manchester. Marlow is a successful town. A few years ago they had a tannery there which employed thirty or forty men, but it has gone out of business. It has been almost exclusively a farming town. It has in the savings banks $555.55 per capita. Newbury is a little town of 487 inhabitants. It is a back town, and yet it has $484.87 per capita in the savings banks. Here is the little town of Dublin, right close by you. It has grown up with wonderful rapidity, not in population, but in wealth, with roads like the boulevards of great cities—that little town up here on the hill. But its advantages are so great and so wonderful that it has secured for its inhabitants, in the savings banks, $287.68 per capita. Bow is another little town, 725 people, and it is devoted exclusively to farming, and it has $368.87 in savings banks, per capita. The town of Rye is a seashore town, and a large number of city people go there for the summer; it has 978 inhabitants, and $415.26 per capita in savings banks. The town of Peterborough has $278.18 per capita, or $697,422 in savings banks.

So I go on through the state, and find that farming towns have much larger amounts, per capita, in savings banks than the cities and larger towns where manufacturing is carried on. There are the statistics. But here are some

few facts that ought to interest us as farmers, and ought to arouse within us a spirit of energy, and determination to stand by our business, to stand by our towns, our privileges and opportunities in these back towns of ours.

Why, we have such advantages in New Hampshire as we have never dreamed of until recently. We are beginning to dream of some of them. We are beginning to feel and to know, that the people from all parts of this country, and almost all parts of the world, are coming to New Hampshire in the summer time, to breathe its pure air, and to enjoy the health-giving influences which this state alone can bestow. We are beginning to feel this, and therefore we are arousing ourselves upon a very large number of subjects. We are talking about forestry. I think there is a great deal of gush and sentiment about this matter of forestry. I believe our forests are growing much more rapidly than they are being destroyed. I believe that the scenery is not retrograding in this state, but, on the other hand, it is increasing and improving. While in some sections there is a destruction, that ought not to be, going on, of the beauty of the forest, yet, as a whole, this state is growing more beautiful, year by year, than it ever was before. A gentleman told me to-day that he bought a little bit of forest, a few acres, for the very purpose of cutting the trees down, in order that he might beautify the section in which he lived, in order that he might see better from his locality the beauties of the mountains surrounding him. It is not altogether necessary that our woods should be retained as they are, but that we should maintain a purpose, all the time, to make them more beautiful than ever before. It seems to me this matter is being discussed, and we are awakening within the hearts of our people a spirit of determination to make our homes more beautiful and pleasant than ever before.

The bicycle is a great thing for farmers. I have never been successful in my few attempts to ride a bicycle ; but I am satisfied it is doing a great deal of good. When the

young men and maidens, and the older men, some of them, ride about our streets on the bicycle, they find rocks, stones, and sandy places, and they begin to complain that the roads are not so good as they ought to be. One of the leading manufacturers of bicycles has begun to arouse a sentiment in this country that I believe is going to be a great thing for the farmers of New Hampshire and of all other sections of the country. The bicycle is coming to the rescue of the farmers.

Not very long ago, I was in the city of St. Louis, and I met a gentleman, whose name I had seen in the papers within a few days as a possible candidate for governor of the state of Missouri. "You are likely to be a candidate for governor." "No, I am not a candidate for governor; but I am in favor of any man for governor who is in favor of giving us good roads in the state of Missouri. This is the most important subject that can be brought before the people of this state. Our people can scarcely go to market, in some seasons of the year, except at a very great loss." You have a gentleman to speak to you to-morrow, who furnishes eggs to his customers on the same day they are laid. If he lived in some places, he would be unable to do that. I tell you, this agitation of the subject of good roads is coming to the rescue of the farmers of New Hampshire. When farmers living two, three, four, five, or six miles away from towns and cities, can hitch up their nags, and drive them with great swiftness over the roads, because they are good, substantial, and solid, then the time will come when our agricultural communities will feel, and be really, in the very midst of the populations of the towns and cities.

I have got the first appointment that has been made by the governor-elect, Mr. Smith, and I feel pretty proud of it. A few days ago, I got a letter from him, and he said,—"I have been requested, as governor-elect of this state, to suggest the name of some one to serve as vice-president" of some convention—I have forgotten now just the name of it,

but something about good roads. I wrote him right back,— "Yes, I will serve." I think that that is the first appointment that the new governor-to-be has made.

This is a sentiment that is pervading the whole mass of the population, throughout the country, and New Hampshire is not going to be behind. She is not behind in anything, generally. She is awake to the circumstances and the times, and she will be up with the times. I believe she is going to be up with the times in this matter of good roads. In this next legislature the subject will be discussed, perhaps almost as much as anything else—the question how the state shall manage to have the best roads for the least money. I believe it is a very important question, a question that interests farmers almost as much as anything else that can come before the legislature, and I believe something will come out of it that will be a very great advantage to the agriculture of this state.

Another thing. Of course you will say that I am a crank, and I have heard that said before. But there is another thing which I think is a great advantage to the agriculture of New Hampshire, and that is that we have n't got but a third as many cider-mills as we used to have. It is not very long ago that we had a cider-mill in almost every school-district of New Hampshire; but they have nearly all of them gone. We have once in a while a cider-mill, but not very many of them. The farmers are beginning to think that they can get along without cider. It was the great curse upon New Hampshire, a few years ago. A gentleman told me—an old man now—that he used to live in the town of Hill when he was a boy, and that he could go out on the top of his father's buildings—you know boys sometimes climb to the roofs of houses—and he could look around in that town of Hill and see seventeen farms that had been drunk up by their occupants.

THE PRESIDENT: Cider, or vinegar?

MR. GOODELL: He did not tell me whether it was cider

or what it was, but I suppose it must have been cider largely. He said there were seventeen farms whose occupants had been obliged to mortgage, and finally sell and dispose of, their farms, and go practically to the poorhouse. He said that now these farms are occupied, and there is not a more active and settled community than now lives in the town of Hill, on those same farms. So here is another thing, as it seems to me, that in these later years is of great benefit to agriculture in New Hampshire.

A great multitude of people come here every year to enjoy our scenery and climate, and it is said that this last year they brought in eight million dollars to be scattered around in various ways among our people. The number is increasing every year, and the amount of money they spend is increasing in proportion. I see no reason why, if we have eight millions now to distribute within our midst from our summer boarding people, within a few years, if we have good roads, if we cater to their fancy, if we listen to their demands, I see no reason why twenty-five million dollars should not come from that source—and who is going to get it largely? Why, surely the farmers are going to get a large share. There is no reason why they should not raise the chickens, eggs, garden-sauce, and various other things which these people demand. They are not raising them to such an extent as they ought. They have not learned yet that there is a demand for it. Many of these large hotels and boarding-houses are obliged to send to Boston and elsewhere for their supplies. But New Hampshire people are waking up to this; they are waking up to it rapidly; there are many places where they are raising large quantities to supply this demand.

So I can see nothing in the near future but success and successful agriculture in this state. I see no reason why the farmers should not in the near future, as in the near past, be exceedingly prosperous and successful. I have referred to the savings banks. We have in New Hampshire

the largest amount of money invested in savings banks, per capita, of any state, or of any community in this country; is it not evident, therefore, that the farmers of New Hampshire are more prosperous than they are in any other place in this country? If that is so, then why should we, the older members of this community, and we, the younger members of this community, think for a moment of bettering our condition by going away—here, there, or anywhere—when the very ground on which we tread, and the very soil which we inhabit, and the very communities in which we live, are abounding in treasure, in beauty, in glory, more abundantly than any other part of this land?

I thank you, my friends, for your kind attention. I felt almost afraid, that having addressed you so frequently, you would almost be sorry that I was here again. I thank you very heartily for the very close attention you have given me, and I hope you will believe, more in the future than in the past, that we have in New Hampshire the grandest, the noblest, and the best place in which we can live, and in which our children can live.

THE PRESIDENT: This meeting stands adjourned until 10:15 o'clock to-morrow morning.

THURSDAY, DECEMBER 29.

THE PRESIDENT: It affords me pleasure to introduce Mr. A. C. Hawkins, of Lancaster, Mass., who will discuss "Poultry Management."

CAN THE FARMERS OF NEW ENGLAND PRODUCE POULTRY AND EGGS AT A PROFIT?

BY A. C. HAWKINS, OF LANCASTER, MASS.

This is a question that often arises in the mind of many an intelligent farmer. It has been demonstrated to his satisfaction that some of the products of his farm have been

raised at a loss ; that he has been using capital, and much valuable labor, in producing vegetables and dairy products that have yielded no actual profit.

The practical business man is he who carefully studies the markets and observes their needs, and then goes about to supply these articles. The practical and successful farmer is he who studies the wants of the consumer, and raises those crops that are in demand at remunerative prices. Many of our New England farmers are selling their cattle, because they cannot produce milk and butter at the prices offered them. Some have become discouraged, and declare there is no money on the farm in New England.

Let me say, right here, that I believe there is no more favorable spot in these United States, to make a good honest living, than right here in New England ; and for any one who has a love for the business, there is no more profitable employment than raising poultry and eggs. There is no stock on the farm that will yield you a profit, unless you provide for them those conditions that are necessary for their thrift and comfort. They must have comfortable quarters, judicious feeding and care, to produce the best results.

It is a fact that only a small percentage of men will make a success of any business, and the cultivation of poultry is surely not an exception to this rule. There are hundreds of abandoned poultry-houses on the farms of New England, abandoned not for the reason that there was not any profit in raising poultry, but because the owners had not the brains and capital and backbone necessary to make the business a success. I know of many who make a success of it, and make a net annual income of from $2 00 to $3.00 per hen. These are the persons who study the nature and diseases of the fowls, and supply them with suitable food and conditions. Fowls will not stand neglect and be profitable, and they will also respond quickly to good care.

If you have all the business you can attend to personally, do not take up poultry as a side-issue, to be under the charge

of hired attendants. If the farmer's son, wife, or daughter has a desire for the work, they can make a success of it. Many of the most successful poultry breeders are women. They are not in as much hurry as the men, and will attend closer to the little details that are necessary for success. A lady in my vicinity cleared $350 on 150 hens in 1889, and only gave a few hours per day to the work. There are hundreds of farms in New England from which owners do not realize this net income. These cases show the possibilities of poultry-raising when all conditions are favorable, and these grand results are reached only by the very few. Start with small numbers, and the experience you will have in caring for them and observing their habits, will prepare you for more extensive operations.

Read the poultry magazines, and study closely the writings of successful poultry men. Experiment carefully with methods advanced by theorists. Many of our writers on agricultural and poultry subjects are not practical men, and all their ideas should be weighed carefully before putting them into practice. Poultry farming on paper and in the poultry yard often requires different management to insure success.

A practical farm poultry-house to accommodate 100 fowls, should be 50 feet long, 12 feet wide, with a shed 25 feet long at each end. There should be a division in the centre of the building, making apartments 25x12, and a shed 25x12 for each flock of 50 fowls. These accommodations may be extended to any desired capacity.

About one fourth of the front of the building may be of glass, but more than that amount is not desirable, as it causes too great a change between the temperature of the night and day, causing the fowls to take cold. The inside of the building should be filled in six inches deep with coarse, sharp sand, and the sheds be filled from six to eight inches deep with leaves or straw. The sand floors will always be dry, and furnish the fowls with the small, sharp stones always

found in the gizzard, and which are a necessity for the proper digestion of their food. The roost and platform for the droppings are in the back part of the building, and the front sill, with a narrow strip nailed to it, makes an excellent feed trough the entire length of the building.

A gravelly, well-drained soil is best for a poultry house, as dampness is liable to cause sickness. A south-eastern slope makes a desirable location, and if near an orchard the fowls will have sufficient shade in summer, which is as needful to their thrift as a sunny house in winter. It is important to select a breed of fowls for general farm purposes that are hardy, prolific layers in winter, of medium size, early to mature, plump in body, and with yellow skin and legs,—all of these qualities being desirable in our New England markets. A broiler ten weeks old, that is plump and has a clean yellow skin and legs, will net you several cents per pound above a coarse, bony chick of the same age and weight.

Fifteen years ago, when I first embarked in the business, I selected the Plymouth Rocks as the breed that had more of these desirable qualities than any other, and from any experiments I have made since with other breeds and crosses I have not found a fowl as well adapted for general farm or market use. We often hear the Light Brahma recommended as a practical farmer's fowl, as the "best fowl on earth." I have kept them for several years, and compared them carefully with the Plymouth Rock, and pullets of the latter breed will actually lay more than eggs enough before the Brahma begins, to pay for the cost of raising to that age. Plymouth Rock pullets average to lay at six months old, while the Brahma are two months later.

The reason is not that they are Brahmas, but because they are too large, and require more time to develop. If the Light Brahma pullet weighed only six pounds at maturity, she would lay as soon as the Plymouth Rock, and if her legs were free from feathers would bring as much in market. Our Light Brahma breeders pride themselves on their 10

and 12 pound pullets, and 12 to 14 pound cockerels, while if they were two thirds of this size they would be much more profitable and desirable. I make these comparisons not for the purpose of booming any particular breed.

I am aware of the fact that in my audience are fanciers of other varieties, who will doubtless have an opportunity to set forth the good qualities of their favorites. I was invited here to address the farmers of New England, and without regard to any personal fancy, I recommend the breeds that my experience has taught me are the most profitable for them to raise. The White Plymouth Rock has nearly the same qualities as the Barred varieties, excepting that they are not as hardy, and are more liable to disease. The Wyandottes are the strongest rivals of the Plymouth Rocks, as a general farm and market breed.

They are about a pound smaller in size, and very plump, with yellow skin and legs. They are prolific layers, good setters and mothers. They are unquestionably a valuable variety for the farmer. There is a growing demand from the farmers generally for thoroughbred males of the Plymouth Rock and Wyandottes, to cross on common fowls. This introduction of fresh blood improves the laying and market qualities of their stock. During the fall of the year, when the fancier is culling his flocks, those males that are not up in fancy points may be procured by the farmer at a nominal price, and it is a good investment for any farmer who keeps a flock of fowls.

Having secured a suitable breed, it is necessary that they have proper food and care. Fowls should be fed on scientific principles, to produce the best results. Food should be given them that contains those ingredients that are needed to keep the fowls in a healthy, vigorous condition, and also that contains the elements required in the formation of the egg. Chemistry informs us that these requirements are found in corn, milk, wheat, oats, lime, grass, and vegetables —articles that are available to every farmer.

In the morning, at daylight, give the fowls a warm soft mash, consisting of one sixth corn-meal, one third wheat middlings, one sixth ground oats, one sixth ground beef scraps or cooked meat, and one sixth cooked vegetables. This soft food should be mixed with skim-milk or buttermilk, if possible. Give the fowls only what they will eat clean in ten minutes, and remove what they have not eaten in this time, as it will keep the fowls more lively, and their appetites sharper, if food is not kept constantly before them.

At noon, scatter wheat, oats, and cracked corn in the leaves and straw in the sheds. By this time the fowls will have become quite hungry, and will scratch vigorously for the grain, for several hours. This exercise is a very important thing in winter, as it is conducive to their health and productiveness. Fowls that are kept thus employed are seldom troubled with disease or feather-eating.

In the afternoon, in winter, the fowls should have a feed of steamed rowen or clover hay. This should be prepared by running through a hay-cutter, and then steamed by pouring boiling water over it in barrels. It should be covered tightly, and allowed to steam several hours, when it will become quite green and tender, being greedily devoured by the fowls. This will take the place of the grass which they eat in summer, and it contains ingredients valuable in producing the egg.

This steamed rowen is often mixed with soft food in the morning, allowing it to steam over night.

It saves much grain, and is worth $20 per ton as food for fowls. Just before dark, give the fowls all the whole corn they will eat, that they may go to roost with well filled crops, of such food as will digest slowly, and keep them warm through the long nights of winter. The fowls should have constantly before them, clean fresh water, ground oyster shells, and green food, such as cabbages or turnips.

With this menu, and well cleaned and ventilated quarters,

the farmer will be rewarded with an abundance of winter eggs, which means high prices and a good profit.

After May 1, the weather is milder, and the fowls will be naturally more vigorous, and will need feeding only twice daily, morning and afternoon, and if they are allowed the range of the farm will need no green food or vegetables. If the fowls are confined in yards, these articles should be included in their regular diet.

Great care should be used in selecting the breeding-stock. The male should be vigorous, of medium size, full breasted, and have rather short, golden-yellow legs. The breeding-hens should be the most prolific layers in the flock, with broad, plump bodies, and rich-yellow legs. A careful observer can easily determine those hens that lay the oftenest and set the least. Hens should also be selected that lay brown eggs, as they are the most desirable in our markets. With this care, it will only be a short time when your entire flock will lay eggs of a rich-brown color.

In breeding, allow twelve females to one male, and give the breeding-stock a wide range at all times after being mated.

Many have the erroneous idea, that, if the breeding-fowls are confined in yards and supplied with green food, their eggs will hatch as well. I have experimented carefully on this point, and find that the eggs hatch much better, and that the chicks are more vigorous and healthy, when the breeding-stock has unlimited range. When the fowls are allowed this privilege their food consists in a great part of insects, grass, minerals, etc., and the egg is made up of such food as nature has supplied for the purpose. Thus the nearer to nature we can bear in breeding-stock at this very important time, the stronger and more natural will be the germ in the egg.

If the fowl is deprived of nature's food at the time of breeding, the constituents of the egg will be different from what it should be as food, to nourish and develop the embryo chick in the shell.

If the chick has been nourished by improper food during this early and most delicate stage of its existence, it starts in outside life in a weakened condition. The chick may have the appearance of being healthy, but if nature's organs are not perfectly constructed they will fail to perform the functions necessary for life, and the chick will droop and die. It is then of vital importance that the breeding-stock should be allowed a wide grass range at the time when the eggs are forming and being deposited that we desire to use for hatching purposes.

I have endeavored to show you, from the beginning, the importance of following nature as closely as possible, and as we shall have strong, fertile eggs if the foregoing conditions are supplied, I do not intend to depart from nature's laws any further than possible, until the chicks are fully developed, and ready for the table or laying-house. I do not then intend to entrust these valuable eggs to the care of an imperfect artificial incubator to carry them safely through the most critical and most tender stage of their growth from the dormant germ in the egg to the sprightly biped, three weeks later.

I will discuss the merits of both the natural and artificial methods of incubation later, and at this time will trust to the faithful hen to hatch the eggs.

The setting-room should be similar to the laying-house, with nests located in the same manner. By removing the broody hens to the setting-room, they will at once go to the nests, of their own desire and without force. Make the nests of fine hay, and form them so that the hen can cover the eggs easily, as a poorly constructed nest often destroys an entire setting of eggs. Put several artificial eggs in each nest, and never place the valuable eggs under the hen until she is well settled, and satisfied with the vocation laid out for her. Any hen that does not attend to the work properly should at once be removed, and a reliable setter put in her place. Nearly every hen will set faithfully, after once

being settled; but in case one leaves the nest from sickness or other cause, another hen may be given the care of the eggs.

I have known a nest to be uncovered for twenty-four hours, in mild weather, and then produce a good hatch of chicks. Eggs are much more liable to be destroyed by chilling during the first week than during the latter part of incubation, as during the first stages the germ is smaller, and the vital organs exposed. In the last week of incubation the chick is more fully formed, and generates considerable heat of itself. The hatching-room should be supplied at all times with whole corn and fresh water, and the attendant should examine the eggs under the hens every second day, and clean with warm water any that may have become soiled by broken eggs or otherwise. Sprinkle the hen and nest thoroughly with insect powder at time of setting, and again three days before hatching, that the coming broods may be free from vermin. At the time of hatching, allow both hen and brood to remain in the nest for twenty-four hours, and they will need no food during this time. The hen and chicks may then be removed to a dry coop with a movable board floor, covered with chaff. The coops should be placed twenty feet apart, in some southern sheltered exposure, where the chicks may be allowed to run about and bask in the sun. The hen should be confined in the coop for four days, after which she may be allowed to run about with her brood, each fine day. The first food for young chicks should be provender (corn and oats ground together) cooked in skim-milk. This should be fed in a moist condition and the chicks will need no drink until three weeks old, when they may have a constant supply of fresh water or milk. The chicks should be fed five times daily, until four or five weeks old, after which three times daily will be sufficient. After they are two weeks old, they may be given a feed of wheat, or cracked corn, twice daily, but always soft feed in the morning. When six weeks old, the food for

chicks may be prepared the same as for laying hens, always mixing with milk when it can be procured at five cents per can of 8½ quarts, as it will put the chicks into market earlier and in better condition. For the general farmer it is not desirable to hatch earlier than March 20 or later than June 1. Late broods are not liable to do well when earlier ones are about, as the older chicks are stronger, and will trample over the later ones to their injury. The chicks of different ages should be kept at quite a distance from each other for this reason, allowing only the flocks of the same age to feed together. When the chicks are six weeks old, they should be removed to other parts of the farm, where they will have a fresh hunting-ground for insects, which will form an important part of their food. They should be colonized in flocks of 40, and placed in small portable houses, 4x8 feet. These houses can be carried in an express wagon to any part of the farm or orchards, and may be loaded easily by two men. These movable houses are boarded perpendicularly, placing the boards a half inch apart, which provides a good ventilation. This house will accommodate 40 chicks till they are ready for market or for layers. The chicks should be confined in these homes during the first day after changing them, letting them out just at dark. They will soon become accustomed to the new quarters, and will be found in their roost every night.

These colonies may be placed near the corn and berry fields, without injury to the growing crops, and they will have shelter from the burning sun and protection from hawks. After the hay crop has been harvested these colonies may be scattered over the mowing-fields to the advantage of the next season's crops. The chicks destroy all the insects, and deposit great quantities of valuable fertilizer.

Chickens that are hatched from March 20 to April 1, should be ready for market as broilers by June 10, and will dress five pounds to the pair. At the usual market price at that season they will sell at 40 cents per pound, or $1.00

each. This leaves a net profit of 75 cents per chicken. The later broods do not sell as favorably, but will net a fair profit when sold for 16 to 20 cents per pound.

April pullets should begin laying in October, and should be removed to their winter quarters before the cold nights come on, as changing them after they begin laying is liable to check them when their eggs are wanted at high prices. Kill off the old hens in August, when they are in great demand at the summer hotels to be served up as "spring chickens."

The poultry-house should be thoroughly cleansed and whitewashed, all the sand on the floor removed and saved for fertilizer, and a fresh supply put in its place. Cleanliness is a very important feature in successful poultry-raising.

One man, after he has cared for 100 hens for one year, should be competent to manage 600 with equally good results, and with this number he should make a net income of $1,200 per annum. Do not be afraid that the poultry business will be overdone. Many are going out of it because they have not the brains and common sense to make a success of it. People have an idea that any one can manage a farm or the poultry business; but it requires a person of greater intelligence to manage a large poultry-farm and make a financial success of it, than it does to be a successful lawyer, minister, or merchant. It is the lack of attention to the details, and the departure from nature's laws, that cause failure.

There is always a demand for fresh eggs and nicely raised chickens. The market is often over-supplied with ordinary poultry and eggs; but if you work up for yourself a reputation of always producing a first-class article that can be depended upon, you can find a ready sale at paying prices.

Before closing, I desire to say a word in regard to artificial incubators for the farmer. I have the reputation of being cranky on the subject of incubators, and some of the

incubator manufacturers have told me that I was behind the times because I did not use them. I am aware of the fact that there are persons who are using them with apparent success in raising broilers and ducks for market. Still I believe there have been ten failures to one success with them. I have hatched thousands of chicks with them, and I have carefully observed the workings of nearly all the leading machines, and I find it is still nothing but an experiment. The manufacturers do not know whether they are giving the eggs too much or too little moisture, too much or too little ventilation. While attending the recent New York exhibition I had a long argument with Mr. P. H. Jacobs, one of the firmest advocates of artificial incubation, and he said he believed that the incubator should run with no ventilation and no moisture.

When a person of his experience tells me that all the incubator men are wrong in this matter it makes me believe more fully that it is all an experiment. It is all guess-work, and it gives me still more faith in the "good old hen," nature's incubator, which we are sure has the right method of bringing out the young birds.

I make a business of raising Plymouth Rocks and Wyandottes to sell for breeding and exhibition purposes in all parts of the world.

These breeds have a variety of colors in their plumage, and require great study and skill to breed them to perfection, and I believe there is no artificial process that can compare with nature in perfecting her creatures. Every condition, from the time the germ is found in the egg until the fowl is matured, has its effect upon the size and plumage of the fowl, and I believe it is as necessary that the egg be subjected to natural conditions during the period of incubation, as it is that the chickens have natural privileges after they are hatched. If we subject the egg during the three weeks of its most delicate existence to surroundings that are unnatural and conditions that no one knows are correct, then

I claim that the future development of that chick is affected in both size, and color of plumage.

Confine a brood of chicks in a yard from the time they are hatched until matured, and give another brood unlimited range during the same period, and the birds at maturity will differ very noticeably in their size and plumage. Those that have had range, and an abundance of insects and other natural foods, will be far superior in every way. I believe I am furnishing my customers with healthier and better breeding stock than I should if I hatched them artificially, and the leading breeders of the country appreciate this fact. I hatch annually from 4,000 to 6,000 chicks, and I can do it much easier and cheaper with hens. It is an advantage to have the hens hatch and rear their broods in the spring, when eggs are plenty and cheap, as they will lay later in the summer, when the price of eggs rules ten cents per dozen higher. One man can properly care for 200 hens, covering 2,600 eggs, in an hour's time daily, and the important part, —the results,—are much more satisfactory to myself than when hatching artificially. I am not aroused at midnight by the electric-bell because the incubator heat is up to 110, and my chicks are not drowned by too much moisture, or dried up for want of it. Their legs and toes are where they belong instead of turning in every conceivable direction, caused undoubtedly by too much or too little heat, too much or too little moisture, too much or too little ventilation, or to some other cause which no incubator man can explain. The chicks are now strong and healthy, ready to take their rations the day they are hatched. The weaklings are a rarity, and everything seems to bloom with nature.

A MEMBER: I would like to ask if you still think as well of your Plymouth Rocks as you did?

MR. HAWKINS: Yes, sir. I have not found anything that equals them, for practical purposes.

A MEMBER: Do you mean for eggs simply?

MR. HAWKINS: Eggs and poultry. Leghorns will lay a few more eggs during the year than the Plymouth Rock; but they are more tender, and will not lay in winter, when eggs are high.

A MEMBER: You speak of selling the old hen in August. Should you sell it the first or the second year?

MR. HAWKINS: I should sell it the second.

A MEMBER: Do you use yearling hens, or pullets, for breeders?

MR. HAWKINS: I use both. I had as soon have a well matured pullet as a yearling hen.

A MEMBER: Do you feed meat to chickens?

MR. HAWKINS: Yes, sir, after they are two or three weeks old. Skim-milk forms their food until then. I mix their food in it.

MR. CURTIS: You have fed it loppard?

MR. HAWKINS: Yes, sir.

A MEMBER: Do you use invigorators?

MR. HAWKINS: Not to any extent. I feed in the winter time, about twice a week, a small amount of cayenne pepper in the soft food, in the morning. An abundance of good healthy food, in proper condition, will produce just as many eggs, without the egg-food.

THE PRESIDENT: I understand you are quite a small fruit raiser, and you consider the chickens a great advantage to the raising of small fruit, running among the bushes.

MR. HAWKINS: Yes, sir. I scatter the young stock in small portable houses, all around the berry-fields and the bushes, to protect them from hawks. And the fertilizing is beneficial to the fruit, and they destroy lots of insects.

A MEMBER: Do the foxes bother you any?

MR. HAWKINS: Very little. I keep them confined at night, or they would be injured.

A MEMBER: You mean the foxes?

MR. HAWKINS: Yes, I confine what I can get of those, and always keep the chickens shut up.

A MEMBER: Can you recommend anything to keep hawks away?

MR. HAWKINS: Nothing can scare a hawk unless it is a shotgun. It is about the worst enemy we have to contend with.

MR. CURTIS: Use buckshot?

MR. HAWKINS: Anything that will kill them.

THE PRESIDENT: How many raspberries did you raise last year in connection with the poultry business?

MR. HAWKINS: I use about all the droppings in my orchards and berry-fields. I had last year thirty thousand baskets of red raspberries.

A MEMBER: What variety?

MR. HAWKINS: Cuthberts.

A MEMBER: Do you raise blackberries?

MR. HAWKINS: Yes. My blackberry plantation is not so old.

A MEMBER: What varieties do you raise, of blackberries?

MR. HAWKINS: I have the Chauncy, and Taylor's Prolific.

THE PRESIDENT: I suppose you consider poultry raising very profitable in that connection, the chickens running among the bushes, clearing the vermin, and fertilizing the land.

A MEMBER: I should suppose they would make good pickers.

MR. HAWKINS: I do not have much trouble in that way. They do n't eat many berries.

A MEMBER: Can you raise berries for them as cheap as any kind of food?

MR. HAWKINS: Perhaps so; but I give them plenty of other kinds of food. As a general thing the fruit they pick is down near the ground, which the pickers would trample over anyway.

A MEMBER: Do you raise ducks?

MR. HAWKINS: Only a few.

MR. CURTIS: You would not recommend stimulants to any amount?

MR. HAWKINS: Not to any amount, except a little cayenne in the winter. I should not feed it regularly.

A MEMBER: At what age do the pullets usually lay?

MR. HAWKINS: From five and a half to six months old —the Plymouth Rocks. The Wyandottes a little quicker. They are not so large, and mature perhaps two or three weeks sooner.

A MEMBER: Do you think it necessary to introduce foreign blood every year, or would you breed in?

MR. HAWKINS: It is a good idea to change the blood in some way.

A MEMBER: Which do you think the best, a young one, or after a year old?

MR. HAWKINS: I had rather have a good, vigorous young bird. You are more sure of strong chickens. I mark the chicks when they are hatched.

A MEMBER: How do you mark?

MR. HAWKINS: By punching a hole in the web of the foot.

THE PRESIDENT: What is the object of that?

MR. HAWKINS: So I can tell which pen produces the best fowl. If I have a dozen or twenty breeding-pens, I mark them all with a different mark.

MR. CURTIS: Have you ever succeeded in breeding a mark into the chick? Some claim that can be done.

MR. HAWKINS: Let them do it that claim it. I would not warrant mine to do it.

A MEMBER: Horned cattle will breed marks.

THE PRESIDENT: I suppose your profits are mostly from the sales of your breeding fowls or from your chickens and eggs?

MR. HAWKINS: A great deal of the profit comes from the eggs. When I began, I used to sell most of the chickens in the market, because I had no demand for them in

any other way. I sell a great many now for breeding purposes, and that forms a great part of the business.

THE PRESIDENT: I understood you had a contract with some large houses in Boston to furnish eggs at so much per dozen?

MR. HAWKINS: Yes, I furnish them so many a day.

A MEMBER: What do you consider the best to pack them in?

Mr. HAWKINS: I pack them in fine dry shavings, wrap each egg in paper, and pack them in baskets with partitions, so all are separated by pasteboard. They will go almost any distance if they are packed closely, with any ordinary handling. I have had them go to Germany and Switzerland.

THE PRESIDENT: In looking around among our friends, we find the secretary of the board of agriculture of Rhode Island, Mr. George R. Stockwell. I now call upon him.

MR. STOCKWELL: *Mr. President, Ladies and Gentlemen:* I did not expect to make a speech here. I have to make speeches in Rhode Island, a good many of them, and it is not an easy thing for me to do. I came here to get ideas, facts, and suggestions, and theories to carry back for our meeting which we expect to have next year. I went down to Connecticut and saw Mr. Gold, and I came to Peterborough to find Mr. Bachelder, to get what I can out of him. I buttonholed him in the hotel, and I hope to catch him again after dinner.

I want to say a word about the board of agriculture in Rhode Island, organized in 1885. It has had a small appropriation, a few hundred dollars, and was not able to do very much. But this year we had an appropriation of fifteen hundred dollars, and then the state board of agriculture thought it could begin to take its place with other boards of agriculture. We have a very wide field to work in. You may think that is a strange thing to say. The state is so

small, the newspapers say, you must be careful what you say in one part, or they will hear you in the other part. This disease, known as tuberculosis, is prevalent, and we are trying to head it off. We think we will eradicate it. We don't say much about it, because we don't want people to know about it. We had it in the northern part of the state, near the Massachusetts line. A gentleman tells me that you have it in the southern part, along the Massachusetts line. Perhaps there is no more of it in Massachusetts than in Rhode Island.

Another part of the work is the holding of institutes. We have not held many this year. The farmers are much interested in them. They think it is a great thing for you to come to their own doors, and give them these facts.

I did not come to make a speech. I will not take up your time. I have been greatly benefited by being here. I consider it a great privilege. I consider it a great honor to be called upon, and to cast in my word at this meeting, and I thank you. [Applause].

THE PRESIDENT: It is always pleasant to me to visit our friends in the different parts of the Union. I discover here in the audience a gentleman, whom you all want to see and hear, the grand master of the National Grange, J. H. Brigham, of Ohio. I would like to have Brother Brigham come on the platform a few minutes.

MR. BRIGHAM: *Mr. President, Ladies and Gentlemen:* It is only a few days since I had the pleasure of meeting with a good many hundreds, if not thousands, of the farmers of the old Granite state at your capital city. I had the pleasure also of meeting at that time, farmers from every state in the Union almost, and a great many from other New England states. Since that time, I have met with the farmers, in their state grange, of Ohio, and of Kansas, and I am back again in New Hampshire. They seem to think they have the right to distribute me pretty generally over the United States of America. I have had one or two calls

to go to Canada ; but a few years ago it was not popular to go to Canada, and I concluded I would not go.

I am very glad to meet you in this state board meeting. I was for six years or more, a member of the state board of agriculture in Ohio ; and it was the object and purpose of that board, not only to hold a great exhibition, but to be foremost in every work that would promote the interests of farmers. We tried to help them in every practical way possible. You, no doubt, are engaged in the same line of work. I notice from your program, that you are discussing practical questions. I believe the time has come, when the farmers must do this,—when they must meet frequently to discuss every little detail that pertains to farming. I think sometimes we overlook the little details that are necessary to success. I believe that is one trouble with the farmers, and with agriculture to-day. We hear very much about the depreciation of agriculture. Complaints come up from the farmers from many sections of our country, especially from the west. And I believe it is largely, because they neglect to look after the details of their work.

I had some experience in the army, and I learned there, that the successful generals, the men who lasted through the war, were not the men who issued great proclamations and told what great things they were going to do, but it was the quiet man,—the general who knew there were oats provided for the horses, shoes for the soldiers, arms and ammunition, and everything that was necessary, everything that would be needed when the shock of battle came—those generals succeeded. Some times they were forced to retire, because they met superior numbers ; but it was no fault of theirs, and they were generally able to cover a retreat successfully.

Every business man in the country finds it necessary, occasionally, to change his plans or methods, to introduce improved methods in his work. He is forced to do this by competition, by the circumstances that change constantly in

all the business affairs of life. The same is true of farmers. We must accommodate ourselves to changed conditions. We must recognize these changes, and when we find that one line of farming will not pay in the section where we live, we must go to some other place if we desire to follow that line. If we desire to remain where we are, we must find something we can do with profit in that place where we live, considering all the conditions that surround us.

I think sometimes that farmers get into the habit of complaining, and hardly know when to stop. They seem to think it is expected of them, and they do n't like to disappoint people. They remind me of a Kansas man I met two years ago. I visited his farm. He landed in Kansas, in about 1852, with a pair of little mules, and twenty-five cents in his pocket. That is all he had. He has now got twelve hundred acres of as fine farming land as you ever saw. Every acre would make a fine garden. He had money in the bank, several carloads of wheat in Kansas City, and, I think, twenty-eight thousand bushels of corn cribbed on his farms ; and yet he talked as though everything was going to ruin in Kansas,—and unless something could be done for the farmers, they would all be bankrupt shortly. It seemed to me that he was magnifying things. In fact, he told me, " Since you were here, I bought a farm, paid five thousand dollars for it in cash." I said, " Where did you get the money ? I did not suppose you farmers in Kansas had any money." Says he, " Well, you remember that drove of steers I showed you when you were here before, fifty or sixty head ? " " Yes, I remember them ; very fine bunch of steers." " Well, those steers paid for the farm, with a little addition from the hogs I sold." Now, this man has been making money right along, hand over hand, every year. He is near a good stock market, almost as good as you have here. Of course, here in New Hampshire you could not carry on the same line of farming that he carries on successfully there. I can see that, as I travel across the country. The crops and line of work that

would suit him, and be profitable, would not be profitable to you. That is one of the problems you must solve, how to make farming pay in New Hampshire. I take it that many of you expect to remain here. There are a great many things here to make up for the lack of some of those rich prairie lands in the west. Your beautiful scenery, lakes and rivers, the homes that nestle in these little corners, look very pleasant to me. I am inclined to think, if the farmers of New Hampshire find out what they can do with profit here, and will follow it diligently, they will find New Hampshire a good place to live in. You have many advantages in a social way which it is somewhat difficult to find in those western states. You have time in the long winter evenings, with not a great amount of stock to care for; you have opportunities for intellectual culture as well as for social enjoyment.

I am glad to see so many good grangers come in from other sections of the state. One object of these meetings is to study these questions, to learn how we can take all the advantage of our business and of our situation. That is right, that is proper. We all want a little money; we need a little, and we have got to have it; and I do n't know of any people in the world that know how to get it, know more ways of getting it, than the Yankees of New England. Under difficulties they sometimes succeed in making a little money where people raised in the west would, I think, almost starve to death, if they did not quite do so. Therefore I am glad to meet you in this sort of a gathering; and I believe that with all the difficulties with which we have to contend as farmers, and with the disadvantages under which we labor compared with some other industries, if the farmers will give careful thought to those things that are necessary to insure success, they may look forward to a future when they will not seriously complain of the depression of agriculture. The time is coming when this profession is not only to be an honored profession, but when it will be a profession in which people can expect to reach a competence in the course

of their years of labor. I think the outlook will be better as we learn to adapt ourselves to these changed conditions, and adopt methods that are reasonable and proper in our section and in our circumstances.

Since I left here I have attended some farmers' institutes in Ohio, and I notice they are attended in great numbers. Some questions are asked that are not easy to answer. But we are glad to hear them, because it indicates the fact that the farmers have been thinking, and that they are trying to use something beside muscle upon the farm. Although something beside muscle should be used, it is a good thing to have a little muscle on the farm, as well as elsewhere. Sometimes it comes into play. I have been, on one or two occasions, where I was very thankful that I had an ordinary amount of it, at least. But I realize more and more, as conditions change, that it is necessary for the farmer to give more thought, to spend more time in studying his business. I am glad, therefore, to see these efforts to look after the little details. Of course we must do our other duties, and I am going to talk this evening upon the farmers' duties, and try to discuss them in a general way. But I am very anxious to see the farmers everywhere considering these questions that pertain to success upon the farm. We must show the farmers in these organizations, in this State Board of Agriculture, in these Grange organizations—we must show the farmers that we are trying to help them in every way; and if we can do that, we gain their confidence. We make mistakes sometimes. We may not always meet the expectations of the farmers; but they will be patient if they see that these societies are trying to help them. That is what we are trying to do in the state organization of Ohio, and that is what we are trying to do here. I am inclined to think that there never was a time in the history of our country when agriculture received so much attention as it does to-day, from the public as well as from the farmer. I believe farmers are beginning to make their influence felt in the manage-

ment of public affairs in the country. I am inclined to think that the time has come when it is necessary for that influence to be felt more and more. There are influences at work in this great country of ours that are not for its good. They are centred in the great cities and in the smaller towns; and it becomes absolutely necessary for those influences to be met, not only in the towns and cities, but by the people outside. The farmers have a great and grand work to do here, and upon them, as heretofore in many emergencies that have arisen, will depend the welfare and the prosperity and the honor of our country; and all this education that is received in these associations of all kinds will help the farmers to meet these responsibilities that devolve upon them in this republic.

I will not detain you longer. It was not expected that I would make a lengthy address on this occasion. But I will say again, I am very glad to meet you in this way, to look into your faces, to see the earnestness depicted there; and I hope and expect that the Granite state will continue to lead in the many ways that she has led in the past, backed up by the intelligent farmers all over our country. [Applause.]

THE PRESIDENT: The meeting will now stand adjourned until 2 o'clock this afternoon.

AFTERNOON SESSION.

THE PRESIDENT: It affords me great pleasure to introduce Professor James Law, of Ithaca, N. Y., who will address you upon "Tuberculosis in Animals."

TUBERCULOSIS IN ANIMALS.

BY JAMES LAW, F. R. C. V. S., ITHACA, N. Y.

The subject of tuberculosis has in past times given rise to many fallacious speculations, and rather blind precautionary measures. Prevailing, as it did, so widely among

men and animals, it naturally engaged to a large extent the attention of physicians and of the public at large.

In the earliest ages there seemed to be a vague, general dread of disease,—thus the Jewish law prohibited the people from eating carnivorous and omnivorous animals, which were likely to derive disease from others, directly through their food, the animal that died of itself, and that which showed clear evidence of disease when slaughtered. To the present day, the Rabbi carefully inspects the internal organs, and if he detects any manifest disease he marks the carcase *traver*, which may be sold to the Gentiles, while the sound or *kosher* meat is alone disposed of to the faithful. He gives, however, special attention to the chest, the common seat of tuberculosis. He even goes the length of inflating the lungs, and if at any point there is a breach, so that bubbles of air escape, the carcase is branded *traver*.

So among many primitive peoples, the man who touched a dead body became ceremonially unclean, and in ancient Greece, the priests of Jupiter might not pollute themselves by even touching meat, until it had been cooked.

In the Middle Ages, tuberculosis was generally recognized as a communicable disease, being confounded with syphilis in man, and in Germany and Italy, laws were passed interdicting the use of the flesh of tuberculous animals, under severe penalties.

Later, Lorin and Dupuy confounded the disease with glanders, mainly on account of the similarity of the rounded diseased masses in the two maladies.

Later and more scientific observations, showed the lack of identity of these three diseases, which so resembled each other in the slow and insidious nature of their progress, and in the naked eye appearances of their specific products, and physicians gradually came to accept the opinion that tuberculosis was a disease, inherent in certain constitutions and families, and developed in such under any disturbing influence. The conviction of its transmissibility lingered, how-

ever, among the common people, and in the south of Europe, to which the consumptives flocked for relief under a more genial climate, the disease became so prevalent, even among the natives, that no one ventured to dispute its communication by contagion. Hence, before the crucial experiments of Villemin in 1865, which demonstrated the inoculability of tuberculosis, the furniture of my room in which a consumptive person had died, in an Italian city, was burned up, and the friends or estate of the deceased were drawn upon to pay the bill. Illogically enough, there was no such destructive disinfection enforced in case of a room in which a consumptive person had lived, provided he left it before death ensued. The householder was always pleased to admit another invalid, and to give him the full benefit of the infection left by the previous occupant, who had gone off to occupy and contaminate another apartment somewhere else. These one-sided and inadequate precautions have resulted in leaving Italy the most consumption-ravaged country of Europe. Her balmy air drew the sufferers from every source, and the effect of the salubrious climate has been far more than counterbalanced by the concentration of the poison, which has passed from man to man, and from man to beast, until Perroncito declares that among the herds of the peninsula it has become a veritable plague.

The observation of the disease in animals served to keep alive the belief in contagion. This Dr. Rühling, of Göttingen, says in 1774, "the malady is transmitted to other animals, previously sound, through their licking each other and inhaling each other's breath, while standing side by side in the stall, also by frequenting the same pastures." Again, in Krünitz's encyclopedia, published in Berlin (1787), it is alleged that "the malady is contagious, and conveyed from animal to animal by contact." Thus the belief in contagion persisted among veterinarians, as we see in the writings of Fromage, Hazard, Spinola, Lafosse, Dupont, Cruzel, and

Zannger. It was only in 1865, when Villemin published his successful inoculations of rabbits and guinea-pigs, that the attention of physicians was again drawn to the subject, and on the part of English and American physicians, especially, it was with a feeling of decided unbelief and opposition that they set about putting the Frenchman's conclusions to the test.

ESSENTIAL CAUSE.—BACILLUS TUBERCULOSIS.

But the stern logic of facts slowly convinced all candid observers of the reality of the contagion, and when, in 1882, Robert Koch demonstrated the existence of the tubercle bacillus, and showed that the disease could be produced with equal facility by inoculating with the material of a tubercle from an ox's lung, or with the isolated bacillus from a colony grown on a gelatine preparation, the last shape of opposition gave way, and the medical world came round to the opinion that consumption was infectious.

To-day there is the universal concurrence of intelligent men, that tuberculosis is a germ disease, which can no more appear in an animal or organ without the planting of the bacillus, than can wheat grow up in a soil in which its seed has not been planted. Usually its development is slow, and it is often difficult or impossible to trace every case back to its true source; yet the incontrovertible fact that the one essential cause of the disease is the presence of the bacillus is a sufficient answer to any claim of the development of the malady from unwholesome conditions of life in the absence of the germ.

The germ is a minute rod, so small that 2,500 of them placed end to end would barely extend an inch. They increase by growing out lengthwise and dividing in two, and by a continuation of this process they form clusters or colonies in the tissues where they are planted, cause inflammation in the part, and finally in many cases the death of the round nodular product, and its degeneration into a

cheesy, yellowish-white mass. The mere presence of a bacillus, however, is not sufficient evidence of tuberculosis, not even if that bacillus has been found in a cheesy mass. In glanders, which attacks all farm animals but cattle, there is a similar degenerated, cheesy, rounded mass, or nodule, containing a similar bacillus or rod a little shorter and thicker than the tubercle bacillus, but not sufficiently so to be distinctive, considering the fact that each multiplies by growing in length and dividing across. The distinction between the tubercle bacillus and others found in similar circumstances, is based on the difficulty with which it absorbs coloring matter, and with which it may be again bleached from such colors. The other bacilli stain more quickly and deeply in pigment solutions, but they part with the stain with equal rapidity, and thus after prolonged staining and moderate bleaching, such bacilli are rendered colorless and practically invisible under the microscope, while the bacillus tuberculosis stands out deeply stained.

The presence is a nodular swelling in the tissues; whether that nodule is soft and red, firm, white, and fibrous, or soft and cheesy, the presence in such of a rod-shaped body shorter than the breadth of a red blood globule, staining slowly in solutions of pigment, and retaining the color obstinately when subsequently placed in a bleached solution, is substantial evidence of the existence of tuberculosis.

ACCESSORY CAUSES.

No one to-day presumes to question the claim of Koch that "We can with good reason say that the tubercle bacillus is not simply one cause of tuberculosis, but its sole cause, and that without tubercle bacilli you would have no tuberculosis." But it by no means follows that all previous investigations as to the supposed causes of tuberculosis are thereby rendered of no account. Far from it. The seed is a prime essential, without which there can be no crop, but you must have in addition a suitable soil and favorable sur-

roundings, in order that any seed may grow and prosper. Wheat will not grow on the bare rock, nor will it mature in the salty sand of the seashore. So with the bacillus-tuberculosis: it must have a favorable soil and climate in order to luxuriant growth. I may name some of the accessory conditions.

I.—HEREDITARY PREDISPOSITION.

It has long been noticed that consumption runs in families, and hence it was looked upon as essentially a hereditary disease, and every precaution was taken to prevent the development of the disease in those who had received the fatal bequest. We now know that the disease itself is very rarely hereditary. From the bodies of thousands of tuberculous cows killed in the abattoirs of Europe, the number of tuberculous offspring taken may be counted on the fingers of the two hands. Sumner records five instances, and Johne and others three more. Landouzy and Martin produced tuberculosis in a guinea-pig by inoculating it with the juices of an apparently sound fœtus of a tuberculous woman. Krabasoff inoculated a pregnant guinea-pig and found the germs in the offspring.

Such meagre gleanings of congenital cases as compared with the notorious prevalence of tuberculosis in certain families suggests the conclusion that the proclivity to affection in such cases is not an indication of inherited disease, but rather of a susceptibility to contract the disease. This conclusion is further strengthened by the facts that, even in milk calves the cases are very rare—under one per cent. where the adult cattle are six per cent.—and that in such cases the disease in a large proportion of cases attacks the bowels, intimating that the infection has entered the system in the milk. Not a few of the obstinate and fatal bowel disorders of sucking children and calves are in reality tuberculosis of the bowels, induced by the milk.

This family susceptibility is often so strong that it is no

wonder that our fathers looked upon it as the sole or main cause of the disease. I shall quote but one case in cattle in point. In 1877 I recognized the existence of tuberculosis in the Jersey herd of Burden Brothers, of Troy, N. Y. The worst were slaughtered, but some incipient cases in young animals were turned out in a pasture by themselves, where they passed the summer in apparently robust health, but they began to droop when returned to the barns in the fall. I again visited the herd, and picked out eleven diseased animals, and had them killed, when Mr. James Burden informed me that I had destroyed every representative of a certain family, not even a grade having been left. From that day on there was no more trouble with tuberculosis in that Jersey herd.

Is it possible to offer a stronger argument for the restriction of our breeding-herds to families that have shown themselves to be specially insusceptible to this disease?

II.—CLOSE BUILDINGS.

Thirty years ago, Dr. Macormac wrote a large book to prove that tuberculosis is the result of imperfect ventilation, and of breathing the same air over and over. We now know that by itself, and in the absence of the germ, this could never have produced tuberculosis, but none the less the book is pregnant with truths of the greatest value to every householder and every stock owner. The case of the Burden Jerseys already referred to is one in point. Though the disease was already recognizable in the spring, the subjects showed an appearance of blooming health all through the summer pasturage, but when returned to the close barns, they fell off so that very soon they had to be helped up in the stalls.

The contrast between the cattle of the prairies and plains and the cows pent up in our city dairies is no less striking. In 2,273,547 fat cattle inspected by the Bureau of Animal Industry only 492, or .02 per cent., were found tuberculous.

Out of 54,158 cows, 669 or 1.23 per cent. were tuberculous. For every tuberculous ox from cattle raised in the open air there were sixty tuberculous cows kept in the barns of the cities and country. This, however, does not tell the whole truth. In shipping cattle a long distance from the plains to Omaha or Chicago, a selection is first made; the fat and the healthy are disposed of, while the unthrifty, which would not pay for carriage, and would spoil the sale of the others if sent, are kept at home. On the other hand, the dairy cattle of our large Eastern cities, from New York to Baltimore, and of Chicago have been recently killed out in rooting out lung plague, and their places have been filled with fresh healthy cows from the country. A fairer estimate can be obtained from some of the cities of the old world. Thus in Copenhagen the proportion of tuberculosis in the cows slaughtered was 16 per cent. (Bang), in Holland it rose in some localities to 19 per cent., and in some places in England to 26 per cent. (Cope). In Delaware county, N. Y., I have examined hundreds of cattle without detecting a single case of tuberculosis, while in some suburban herds I have found as many as 50 per cent. tuberculous. In one high-class herd 40 tuberculous have been killed during the past two years, and of the 20 remaining, half are under grave suspicion. In another Devon herd I found 59 out of the 60 cattle manifestly tuberculous. All this goes to show that, in an open-air life, or in the absence of the germ, tuberculosis may be entirely absent, while in presence of the germ, the close crowding of animals in a poorly ventilated building contributes largely to its spread.

Mr. Even records that in Buenos Ayres the native stock suffers to the extent of half of 1 per cent. while newly imported stock suffers to the extent of 10 or 15 per cent. Here the confinement and breathing of impure air on shipboard are fairly chargeable with the increased prevalence. This speaks in the strongest terms for an open-air life, and for cattle-raising in a climate such as the Southern states and

Pacific coast, in which stock can be constantly out of doors. In our Northern states, and especially for dairy cows, good shelter is essential, and here, accordingly, our attention must be given to secure perfect cleanliness and good ventilation; but, above all else, the exclusion of the germ. The rebreathed air lays the system open to the attack, but that attack will never come if the bacillus is absent. A number of years ago, I found 50 per cent. of the dairy herd of a large state institution in New York affected with tuberculosis, and, among other things, I advised the disuse of a close, ill-ventilated brick barn. The cattle were destroyed, and the barn thoroughly disinfected, and though again filled with cattle, there has been no further trouble.

DARK STABLES.

Like rebreathed air, darkness predisposes strongly to the disease. Indeed, it acts to some extent in the same way. Like the colors of plants, the colored elements of the blood —the red-blood globules—are developed under the action of light, and in darkness the red globules become deficient. But these red globules are the carriers of the oxygen from the lungs to all parts of the body, and if there are too few globules available, less oxygen reaches the different tissues, and they suffer exactly as they would if the air had already been breathed and robbed of its due proportion of oxygen.

INSUFFICIENT FOOD.

Whatever weakens the constitution diminishes its power of resistance to this as to most other germs, and poor and insufficient food holds a high place in thus predisposing to tuberculosis. At the same time the fattest animal is not, therefore, proof against tuberculosis. Hence scrofula has been the scourge of the poor, as tuberculosis has been of dairy herds. In the latter the demand for nourishment of the calf, and the feeding adopted to stimulate the milk, to-

gether with the urging of the udder by clean, careful milking, strain the digesting and assimilating powers to the utmost, and in the presence of the bacillus many fall under its sway.

INBREEDING.

Persistent close-breeding is undoubtedly a common factor in developing a predisposition to tuberculosis, mainly, no doubt, by reason of its intensifying the already existing family character of susceptibility, just as it intensifies and fixes other family traits, good and bad. There is every reason to believe, however, that, in addition to this, it begets a certain weakness of constitution comparable to the increasing lack of fertility among themselves, which appears in a family that has been too closely bred for a series of successive generations.

BREEDING TOO YOUNG.

Breeding of immature animals is a strongly predisposing cause, as the demands upon the system for the nourishment of the offspring, and at the same time for the dairy products, interferes with the full development of the dam, rendering it weak and susceptible.

ILL-HEALTH.

The whole list of acute, and still more of chronic, diseases, may be adduced as predisposing causes of tuberculosis, as they, one and all, leave the system weakened and susceptible.

On the contrary, in weak subjects exposed to tuberculosis, among the best preventives are tonic remedies, like a bracing out-door life, a well-developed muscular system, plenty of sunlight, and a preparation of iron, strontia, and cod-liver oil. Among foods, such oleaginous agents as linseed, or rape-seed, or cotton-seed would be especially commendable.

But some diseases are particularly strong in their predisposing influence. Diseases of the air-passages and lungs

are especially so, by reason of their weakening the parts upon which the germs fall, and preparing a receptive field for their growth. The inhalation of dust and smoke is especially to be feared, because they irritate, and produce a raw surface unusually favorable to the reception and growth of the bacillus.

On the part of the stomach, disorder of any kind paves the way for the successful passage of the bacillus through the gantlet of the organ, and for its arrival in full vigor in the more favorable intestine. The bacillus tuberculosis lives in an alkaline or neutral material, and anything sour or acid is hurtful or fatal to it. In the acid secretion of the healthy stomach, therefore, it runs great risk of destruction, but under an attack of dyspepsia, when that secretion is suspended, or when all the food is not thoroughly digested, it may safely escape this danger, and become fatally implanted on the alkaline bowel.

Then, again, nothing will more certainly undermine the vital powers than a confirmed dyspepsia, as without the digestion of the food there can be no absorption nor assimilation of the nutritive principles. Disorders of the stomach and bowels are, therefore, among the most fruitful factors in bringing about tuberculosis, and in man especially the onset of the disease is often preceded by a persistent indigestion.

ANIMALS SUSCEPTIBLE TO TUBERCULOSIS.

Few, if any, diseases can boast a sway over a wider range of animals than tuberculosis. Among the domesticated animals cattle are perhaps most susceptible, but chickens, guinea-pigs, rabbits, swine, and goats follow closely on their heels. Some have thought that dogs, cats, sheep, and horses are exempt, but all contract the disease when inoculated with fresh tuberculous material. Their partial escape is, therefore, probably due in part to the great amount of out-door life which they enjoy, and, in the case of horses and dogs, to the greater amount of exercise enjoyed, to the better con-

dition of the muscular system, and to the greater constitutional vigor. Yet, after making all due allowance for these and other causes of exemption, it must be allowed that these four animals enjoy a native intolerance of the affection, to which the first named animals are strangers.

Among the less domesticated animals that contract tuberculosis may be named caged apes, lions, kangaroos, deer, elk, gazelle, antelope, and, in addition, the rats, mice, and other vermin of our houses and barns. All must, therefore, be considered as possible bearers and disseminators of the infection, and none must be ignored in any systematic attempt to *stamp out* the disease. Some, however, are justly considered to contribute more than others to the maintenance of the affection, and in this connection, in addition to man himself, we must especially name cattle, fowls, and pigs.

INDESTRUCTIBILITY OF THE BACILLUS TUBERCULOSIS.

Before referring to the rôle fulfilled by these different subjects in the propagation of tuberculosis, it seems desirable to learn something of the conditions which tend to destroy the vitality of the tubercle-bacillus and those under which its survival may be expected.

DRYING AND HEATING.

Though the infecting material be *dried up* and reduced to powder, the germ is not destroyed, provided that too high a temperature has not been used in the drying. As this subject of destructibility by heat is a very far-reaching one, I may be pardoned for dwelling on it a little more at length. Chauveau and Arloing found it infecting after having been heated to 158° F. for half an hour. Toussaint found that broiled steak, the interior of which had reached 162° to 176° F., was still infecting. Martin heated tuberculous matter in sealed tubes to 212°, but found that even then some germs would exceptionally escape. Chauveau and

Arloing found that nothing survived half an hour of the boiling temperature, and Galtier found that 162° F. kept up for a length of time sterilized. This last temperature coagulates white of egg and other albumens, and, if continued so as to change the contents of the germ, it appears to sterilize it. Below this temperature, however, the blood in the interior of meat is not coagulated and discolored, but oozes out a red fluid, and the germ survives. So much for eating the *rare* steaks of a tuberculous animal.

Now, this temperature which will coagulate albumen is not reached when tuberculous matters dry spontaneously in the open air. The dried up expectorations, therefore, are still infecting, and, as reduced to powder and blown about by the winds, these become prolific sources of infection. In barnyards, stock-yards, and railroad cars this operates ; and for man, in rooms, stores, and streets the same distribution of the poison takes place. It is now allowed that the handkerchief is one of the most prolific sources of infection. The expectoration dried up on the cloth is reduced to powder, and later shaken out on the air to be breathed by some one else. In the case of cattle, the manger, smeared with the discharge of the diseased animal, dries up and retains the virus in full strength for a subsequent occupant of the stall. We constantly see tuberculosis attack in succession the animals placed in the same stall, and those standing next the diseased one and privileged to eat out of the same manger. As the milder cases usually pass without recognition, it would be an admirable precaution to divide each stall from the next by a close partition at the front, so that the cattle could neither lick each other nor a common manger. Then when a diseased animal is removed, the manger should either be destroyed and replaced by a new one, or thoroughly disinfected by a strong solution of chloride of lime. Another important precaution is that each animal should be trained to take its own particular stall, and not be allowed to go into any stall at random. This matter of the stall and manger

is all-important, as far more cases arise from this mode of infection than from breathing the same air or inhaling infected dust.

For the same reason, persons affected by tuberculosis should not be allowed to attend in the stables, nor to expectorate on the floors nor the fodder of the animals. For man, sanitarians justly advise that all expectorations should be made into cuspidors containing water, to be disinfected and cleansed at frequent intervals, or into tissue-paper, to be carefully burned as soon as possible.

By preventing the drying of the virulent discharges, the great danger of their diffusion on the air is overcome, but it does not by any means follow that when wet the material is harmless.

SURVIVAL IN WATER AND MOIST EARTH.

Galtier and others found that the infection was preserved indefinitely in springs, ponds, and wells of all ordinary temperatures. Hence the danger of common drinking-troughs, of streams that have run past infected herds, or the place where their manure has been put, and of the soils that have received the manure and carcasses of the diseased. Galtier failed to produce tuberculosis with vegetables grown on soils that had been manured with infecting material, but it is manifest that the survival of the germ in water implies its survival in moist soil, and that the earth of such soil which clings to turnips, beets, potatoes, and other roots and tubers, is not altogether free from danger. This is a slight danger, it is true, but it suggests the destruction of infected manure by burning or disinfectants, and of the carcasses by burning or boiling rather than by simple burial. If buried, it should be where no root-crops are to be grown for a year or two thereafter.

Freezing does not destroy the virus. Galtier kept tuberculous matter for two months in water at 39° to 50° F., and for four days at 27° F., and found it still infecting. In

another case he kept such matter for two months at a temperature at all times under 54° F., and for five days at 16° F., yet it proved virulent. Neither the winter's frost, therefore, nor the common alternations of temperatures in the soil can be trusted to disinfect it in a short time.

Putrefaction does not destroy the virulence of tuberculous matter. Cornil and Babes left such matter to putrefy, and then dried it up, but found it still infecting. Mallassez and Vignal first dried up such matters, then softened them in water, and left them to putrefy, but found them still virulent. Galtier kept such matters moist and putrid at a temperature varying from 38° to 48° F. for seventeen days, but found them still infecting.

Heavy salting in the case of meats appears to be fatal to the germ, but requires at least one month to make it effective. Galtier found that the virulence was unaffected after eight days in salt. After fifteen days it was found to be harmless to rabbits but still fatal to the more susceptible guinea-pig. After thirty days it was alike harmless to both. While allowing, then, that salt may destroy the tubercle-bacillus, we must yet recognize that even in a concentrated form it acts with great tardiness, and considering the unequal state of saturation in different parts of a large mass of meat, it would be foolhardy to trust to its efficiency as a general precautionary measure. This caution is reinforced by the fact that Galtier found that salted pressed cheese was still infecting after the lapse of eleven months.

All this goes to show that the tubercle-bacillus, which absorbs so very slowly any coloring-matter, is equally tardy in taking in other materials that may be unfavorable to it, and that it may thus easily survive many conditions which prove destructive to most other bacteria. Hence the necessity of adopting special precautions against its preservation, and transmission through the meat products and excretions of tuberculous animals.

FOOD PRODUCTS OF TUBERCULOUS ANIMALS.

I have already stated that tuberculous matter is liable to infect the bowels, abdominal lymphatic glands, and liver, when taken in as food, and, above all, in the case of a dyspeptic. The rule, however, is that we all have frequent temporary derangements of the stomach, and therefore no one can count on impunity if he eat tuberculous meat. Among animals the evidence of this is abundant, especially in the case of the young living on infected milk. A few years ago, at a large public institution in New York, the hogs fed the offal of the tuberculous cattle slaughtered, became in great proportion tubercular. In the way of direct experiment Zurn, Gerlach, Johne, Kolb, Toussaint, Chauveau, and a host of others have conveyed tuberculosis to guinea-pigs, rabbits, fowl, swine, dogs, cats, and other animals by feeding tuberculous products. All did not suffer, but a considerable number, embracing all the different species of animals named, became tuberculous. In three hundred and twenty-two experiments recorded by Johne 13 per cent. became tuberculous.

The *red flesh* is usually remarkably free from tuberculous deposits, and it has been claimed that its juices are destructive to the bacillus, and that the flesh can, therefore, be eaten with impunity. To determine this, Schmidt fed the flesh of a tuberculous ox to fowls, and produced abdominal tuberculosis. Toussaint fed it to pigs, Viseur to cats, and Galtier to sheep and rabbits, with the same result. All that can be said for flesh is that in cattle it is less frequently the seat of tubercle than the internal organs, and that, therefore, the eating of it is somewhat less dangerous. That it cannot be considered harmless may be inferred from the fact that, in advanced or generalized tuberculosis, the bacillus is found in the circulating blood, and that the blood contained in the capillary vessels of the muscles (red flesh) is therefore infecting. There is the further consideration that the lym-

phatic glands, which are the favorite seats of tubercle in all parts of the body, are quite numerous in the muscular system, and the enlarged tuberculous glands beneath the skin and between the muscles become valuable means of recognizing the disease. The groups of such glands most commonly affected in cattle are those situated around the throat, beneath the tongue, in front of the shoulder-blade, inside of the elbow, in front of the first rib, in front of the stifle, and in contact with the udder. In addition to these are many smaller masses of gland-tissue, not recognizable without the microscope in health, but which in tuberculosis often stand out as peas, beans, or hazel-nuts under the skin. These are most commonly found on the side of the belly, between the last rib and the hip-bone. Then there are many groups of lymphatic glands more deeply ensconced in the muscles, and others in contact with the breast and back bones, which are beyond the reach of examination in life, but all of which go with the dressed carcass and contaminate the beef as sold. Finally, in swine, in place of the juice of the muscle forbidding the invasion of the bacillus, this tissue becomes a favorite seat of the rather soft tubercles. The flesh of tuberculous swine is, therefore, more dangerous as a food than that of the infected ox.

It is only fair to say that the juice of the apparently sound muscle of an ox with localized deposits of tuberculosis is less dangerous than are distinctly diseased parts. Chauveau and Arloing found that guinea-pigs fed tubercles from cows were, without exception, rendered tuberculous, while others fed the muscle-juice of the same animals became infected only in the proportion of eight per cent. Nocard and Galtier respectively, by inoculating with the muscle-juice of tuberculous cows, infected in the different attempts 5 and 5½ per cent. This is a small percentage of infection, but that there was any infection at all goes to condemn the whole carcass, for no one can tell whether the bacilli are confined to one part or uniformly diffused, and if they are

uniformly distributed, as is altogether the most probable, then the carcass of four hundred pounds must presumably contain a large number of germs, and must endanger a great number of consumers.

If the flesh of animals with even local tuberculosis must be eaten, it should only be done as canned meat, which has been subjected to prolonged heating, and in what has been boiled or fried, any shade of the red, bloody color should be warrant for rejecting it.

That such meat is put upom the market is all too certain. Nor is it to be recognized by any faulty or defective appearance. German reports inform us that, of the tuberculous cattle found in their abattoirs 24 per cent. furnish beef that would pass as the first quality, 44 per cent. as of second quality, and 27 per cent. as of third quality.

Milk is also a dangerous medium of infection. This is especially so if the udder is itself involved in the disease—a very frequent condition of things. Bang, Galtier, May, Nocard, and Bollingér all produced tuberculosis by inoculating with such milk. Woodhead and McFadyean produced the disease in six out of thirty-one trials. Apart from the udder disease, the milk is especially likely to prove infecting when tuberculosis has become generalized, the tubercles being extensively distributed through the body. In such a case the bacilli have invaded the blood to a large extent, and they pass through every organ in which the blood circulates. Hence the milk is almost constantly contaminated.

It is not always easy to determine that the udder is absolutely free from tubercle; but in cases in which it is apparently free, the milk is still frequently infecting.

Bang produced tuberculosis, by injecting such milk, once only in twenty-eight times; Ernst, in 37.5 per cent. of his trials with guinea-pigs, and 15.5 per cent. of the rabbits. Schmidt-Muhlheim, May, Stein, Baumgarten, Fischer, Herschberger, Gunther and Harms, Siedamgrotzky, Ger-

lach, Peuch, and Hedley were also successful in producing tuberculosis with such milk. Baum says that the milk of tuberculous cows is infecting in 60 to 70 per cent. of the cases.

This is a question of surpassing importance, considering how much milk is used on our tables daily, how universally it is fed to infants and invalids, and how the skimmilk, buttermilk, and whey are fed to our calves, swine, and fowls. For the farmer's own profit it is imperative that he eradicate this scourge from his herd, and it is a question of life or death with the child or invalid whether he can get his milk free from the bacillus.

Whey, *skimmilk*, and *buttermilk* are, as a matter of course, infecting if obtained from infecting milk.

Butter appears to have been less frequently put to the test than other dairy products. Bang, however, put a rabbit on the butter of a tuberculous cow, and in three months it died tuberculous.

Cheese has also been comparatively little investigated. Galtier, however, fed to two guinea-pigs cheese made from the milk of tuberculous cows eleven months before, and he thereby infected the guinea-pigs. The tuberculosis in the guinea-pigs was successfully inoculated from these animals upon others, so that no doubt remained as to the true nature of the affection. At the end of the twelfth month he found this cheese no longer infecting.

RELATION OF TUBERCULOSIS IN MAN AND BEAST.

I never speak on this subject without dreading that I shall be thought an alarmist. I certainly have no intention of acting that part. For thirty years I have believed tuberculosis contagious, and that it was transmitted from beast to man as well as from man to beast. But the public mind was not prepared to act on such a belief. Fifteen years ago, when dealing with the lung plague of cattle, I was often urged to make a clean sweep by dealing with tuberculous

cows as we did with the lung plague ones. I dissuaded my co-workers at that time on the ground of policy. There was, at that time, no public spirit to sustain us in such a course, and there was not sufficient money available to pay for the animals killed. But times have changed; the lung plague we have extirpated from the continent, and men's minds are open to the importance of tuberculosis,—a subject far closer to the home and heart than lung plague ever could be. Lung plague affected the pocket, robbing us of a few millions a year; tuberculosis costs us our household treasures—our strong men and tender women, our laughing children, and our reverenced parents. The time is come to speak the truth on this matter, not in the impassioned words of an alarmist, but in a sober statement of fact. The dealing with a disease of this kind is by no means the simple matter of dealing with lung plague. *That* affected cattle only, and could be crushed out speedily and effectually by the extinction of the whole infected herd and the disinfection of the premises. Tuberculosis, on the other hand, may be maintained by almost any genus of animal, wild or tame; it may be carried by prowling vermin or migrating birds, and finally, as occurring in man, it cannot be instantly done away with, but must be recognized as a standing menace to his neighbors and his animal dependents. We cannot, therefore, expect the same speedy and thorough effects with tuberculosis that were obtained with lung plague. But, none the less, we are called upon by every consideration of humanity, and by every rule of personal and political economy, to begin the good work which shall one day result in the extinction of this scourge of our civilization in house and herd alike.

At present, in the human population of New York state, every eighth death is from consumption. No other single disease at all approaches this in the number of its victims. Yet practically nothing is being done to restrict its ravages. Now, I do not say that the extinction of this disease in farm

animals would put a stop to the affection in man. Man contracts the disease from man to a greater extent, doubtless, than he does from all the domestic animals together. But, at the same time, no inconsiderable amount of human tuberculosis is undoubtedly contracted from the lower animals; and this important source of infection, which can certainly be cut off with great profit to the stock-owner, should be done away with at once.

To take but the one source, that of our dairy herds, we find that, where cattle are few or absent, or where they are kept all the time in the open air, and are, therefore, little exposed to infection, consumption is usually less prevalent in the human family. Among such places I may name northern Norway, Sweden, Lapland, and Finland, where reindeer replace the cattle; Hudson Bay, and the islands of the Pacific, where no cattle exist; and the Scottish Hebrides, Iceland, and Newfoundland, where cattle are few. In Algiers, though a resort for consumptives, yet cattle are few, and live apart from the cities and in the open air, and tuberculosis does not increase. In Italy, on the northern shore of the same sea, where cattle are housed, tuberculosis has become the scourge of man and beast. In Australia, the great resort of the English consumptive, the disease, formerly unknown, has become exceedingly prevalent, and the same already promises to be the case for our own Minnesota. The Indians of the Northwest furnish the most striking illustration of the infection derived from cattle and fostered by unwholesome conditions of life. Dr. Treon, in the "American Practitioner," describes the poor, emaciated, diseased animals furnished to the Indians; how the Indians eat the liver, tallow, and entrails raw, and how the beef which is to be preserved is dried, pounded, and packed in skins, to be eaten later without cooking. Frequently they eat animals that have died of disease; and from the mode of dividing the beef, it is probable, he says, that at least one hundred persons may become inoculated by a single

diseased animal. Dr. Holder, in the *Medical Record* (August 13, 1892), gives us some of the results. At Green Bay, Wis., Tulalip, W. T., and Western Shoshone, Nev., 50 per cent. of the total Indian mortality is from tuberculosis; at Lower Brulè, Dak., scrofula is present in 60 per cent. of the Brulè Sioux under twenty-one years, and at Crow Creek, Dak., fifty out of a total Indian population of 1,200 die every year of consumption and scrofula. Apart from increase, this would kill out the race in twenty-four years. This is the dark side of the question, and is worthy of study by those who think that the dangers of tuberculosis in cattle are too insignificant to demand serious attention.

If that is the lesson as to cattle, it is no less so as regards pigs and fowls. Both of these classes are kept about slaughter-houses, are both fed on the offal uncooked, and are, therefore, in the best possible condition to convey tuberculosis. All the diseased parts that are unmarketable go to them, and if any carcass is altogether unfit for sale, it can at least make pork and eggs. Now I have no objection to such disposal of the refuse, if it were first submitted to several hours' hard boiling. But as matters are now, so long as our herds furnish tuberculous animals to the slaughter-house, so long will tuberculosis be systematically developed in the hogs and fowls. Nor is it in the slaughter-houses alone that this culture of the contagion is ignorantly conducted. In a recent visit to Madison county, N. Y., where one herd had furnished six cases of tuberculosis, I found that neighboring farmers had secured the diseased carcasses to feed their poultry. Under the delusion that cattle alone suffered, they had set about planting the germs in their own homesteads and herds.

Let me repeat that tuberculous pigs are even more dangerous than tuberculous cattle, because the tubercles are formed to a greater extent among the flesh which comes to our tables, rather than in the internal organs which are cast aside. As regards tuberculous fowls, it is enough to say

that the germ obtained from them is especially virulent and dangerous.

REMEDIAL MEASURES.

It follows from what I have said, that measures for the restriction and extinction of tuberculosis must consist largely in a scientific dealing with our herds of domestic animals. Such control of our herds demands the employment of professional skill of the best kind. We are confronted with two dangers: one is the danger of ignoring a most deadly contagion, and allowing it a free and unrestricted field for its ravages; the other is the risk of the exclusion of valuable products from the market, because the animals or herds furnishing them are wrongfully pronounced to be victims of tuberculosis. Recently I have found, in different parts of New York, cattle that had been secluded for months as tuberculous when they only suffered from a chronic nasal catarrh, kept up by twigs which they had broken off inside the nose. The average New York veterinarian, created by act of the legislature, without *alma mater* and without education, does incomparably more harm than good in dealing with such diseases. Even the graduates of our veterinary schools, conducted as they are with a short and inadequate curriculum, and in large cities where the clinical education is confined practically to horses, are rarely equipped with the skill and experience necessary to such a work. But they are the best material ready to our hand, and by selection and training their ranks may furnish available agents.

The skill necessary to this work is of a high order, and the patient, careful, and truth-loving devotion required is no less high. An acute or advanced case of tuberculosis of the lungs may be easily distinguished. There is extreme emaciation, a frequent dry, husky cough, profuse discharge from the nose of a nauseous yellow, muco-purulent matter, with fine flakes, or even gritty particles, a heavy, offensive

odor to the breath, inappetence, sunken, bloodless eyes, a scurfy, unthrifty, adherent hide, and general weakness and wretchedness. Then in the lungs are isolated patches that sound flat and solid on percussion, and there are sounds at intervals over the chest of wheezing or creaking, or like the bursting of fine bubbles, and a variety of other sounds which indicate the different morbid conditions. In such cases the condition may be all too evident, and it only lacks the microscopic demonstration of the bacilli to make the conclusion absolutely certain. But when the lung symptoms are obscure, the area of dulness and morbid sounds hidden under the thick muscular shoulder, or drowned by the loud continuous rumbling of the bowels, when the tubercles are not in the lungs at all, but in the lymphatic glands in the chest or abdomen, or in the glands under the skin, in the liver, spleen, kidney, bones, or elsewhere, it may require all the skill of the most accomplished man to detect the affection, and even he may be finally left in the dark. He cannot, like the doctor, secure from the patient a history of the case, he cannot ask where there is pain or suffering, nor anything as to feelings that would be a valuable guide to the physician. If he examines the discharge from the nose, and finds rod-shaped bacteria, he must be skilled enough in the staining of these to say whether they are the germs of tubercule or of some other disease. In case even this fails, he may be thrown back on a graduated hypodermic injection of Koch's lymph, which will develop an elevated body temperature in the tuberculous and leave the non-tuberculous unaffected ; or he may have to resort to the inoculating of another less valuable animal with the morbid products, and wait for the result.

When I say that these occult cases often constitute the majority, I only state what the inspector has many a time to deal with, and I intimate how difficult the work to which he is called, and the skill and care requisite to its successful performance.

Under such circumstances, the physician is even more helpless than the veterinarian. He may in some senses be a better educated man, though this is by no means always the case; but he finds himself so nonplussed by the entire absence of all voluntary assistance from the patient, he is so much in the dark as to the position and relations of the different organs in the quadruped, so entirely unacquainted with the normal sounds and other indications to be expected in the different parts, and so ignorant of the different diseases of the animal that may be easily confounded with tuberculosis, and so uncertain of his ground at every step, that his conclusions are quite as likely to be wrong as right, and it is only after a special training in the structure and diseases of animals that his medical skill can be availed of in this work.

The dissemination of sanitary knowledge among stock-owners will be an important element in this general work. The purchaser cannot afford to take an animal from an unknown source, and even from a known herd he ought to seek with it substantial evidence that no animal from such herd has died or been disposed of for disease in recent years, and that no suspicious sickness exists in such herd at the time of sale. Above all, he should take no animal from a city or suburban dairy, nor from a swill stable. Healthy animals can be had from such places, but the risk is great, and in the case of a disease so insidious as tuberculosis, he cannot afford to take the risk. Now cattle from country herds that have had, in the main, an out-door life can always be had, and with a knowledge of the previous soundness of the herd are greatly to be preferred.

Another important precaution is the inspection of cattle for slaughter. To make this efficient we must have something more than the perfunctory inspection of the dressed meat in a butcher's stall. Under such a system some of the most dangerous diseases which affect the blood or internal organs without injuring the appearance of the meat, are

inevitably thrown on the market. Many cases of tuberculosis, in which the lungs and lymphatic glands of chest and abdomen are affected, would present fair carcasses. In German abattoirs the tuberculous animals furnished what appeared first-quality beef to the extent of 24 per cent. of their numbers.

The skilled inspector must, therefore, examine animals before death and during slaughtering, and instruments and methods of precision must be called into requisition when necessary to determine the true nature of the case. Such inspection, however, demands a public municipal slaughter-house, under strict sanitary regulations, and where all butchers can hire at low rates all facilities necessary for slaughtering and for utilizing the products. In the great cities of Europe such institutions are conducted most profitably, not only on the ground of sanitation, but of economy and inoffensiveness as well. In the Edinburgh abattoir a slaughtering-booth, pen, and yard, with all facilities for utilization of the products, can be rented for $40 a year.

Such municipal abattoirs are also the true remedy for the existing system by which the market for fat stock and that for dressed meat are both controlled by a few great packers, who have set up mammoth establishments at the great centers of the cattle trade. Under the existing system, by which the United States Government furnishes official inspectors at such centers and denies them elsewhere, thereby giving to these packers and to no one else certificates which will secure them the admission of their meat products into the markets of Europe, it gives to these packers a virtual control and monopoly of the market at home and abroad; for, having the exclusive disposal of all the surplus, they can practically dictate prices to both farmer and consumer.

A system so manifestly unrepublican and unjust cannot continue, and its proper remedy lies in the establishing of municipal abattoirs and inspectorships which shall place

all good meats on a par, and will at once serve to purify our herds and protect the health of the public.

I must not close without emphasizing the importance of a due consideration of property rights.

Sanitary laws which in any way ignore or disregard the rights of property, have within themselves the seeds of defeat. If in our municipal abattoir the butcher cannot conduct his business as well and economically as he could in his own establishment, he or his competitors will circumvent or evade the law in some way. If the stock-owner is not fairly reimbursed for his animals slaughtered for the protection of the public health and the purifying of the herds of the country, unscrupulous men will find ample means of trading off the as yet incipient and occult cases of tuberculosis, and of scattering the infection widely in new herds. Compensation must stop short of making the sanitary bureau a profitable customer for animals at sound prices, but it must be so liberal as to enlist the ready co-operation of the owner of the sick beast in having it disposed of.

A MEMBER: I would like to inquire of the professor if it is possible for an animal to have this disease far advanced with no indication of it in the lungs.

PROFESSOR LAW: You find cases in which the disease is in the main concentrated round the throat. They wheeze all the time, by reason of the tubercles pressing in on the air passages of the throat, and you may have considerable deposits in the lymphatic glands, without the lungs suffering to any material extent. If, however, you speak of a really advanced case, if you don't find the lungs and the bowels, or one of them, affected, you will usually find disease, acute inflammation, or a little red swelling here and there over the surface of the lungs, and this same red congested membrane hanging from the cells at such points, and here and there usually a little thickening. I have seen them in the chest of the cow, about a foot long, lying along under the back bone.

A MEMBER: I would like to ask how this trouble shows itself in swine.

PROFESSOR LAW: It shows itself in the lung, or, if they have been fed milk or meat uncooked, it may show itself in the bowels and in the glands connected with the bowels, in the membrane that suspends the bowels, beneath the back bone and also through the muscular system. In swine it is quite common to find tubercles here and there scattered through the body between the muscles, and showing softer than you find them in cattle. In cattle they may be hard and gritty as you cut them or scrape them with a knife. But in pigs they have a tendency to be soft, almost as if they were collections of liquid matter, like pus.

A MEMBER: Do they attack the glands?

PROFESSOR LAW: Oh, yes.

A MEMBER: At what stage is the disease most contagious?

PROFESSOR LAW: Whenever there is opportunity for the germ to escape from the system. It is impossible to give an answer that would apply in all cases. If it affects the lungs it is pretty sure to escape by way of the air passages, and with any discharge from a tuberculous lung it is likely to be discharged. If it affects the bowels, it is likely to pass off from the affected surface and be more or less contagious. If it affects the muscles alone, there is less likelihood of its being contagious at the time; they do not escape so readily. The question is very largely whether the tubercle is colonized on or near a free surface so it can escape readily.

A MEMBER: How can you detect the germ in milk?

PROFESSOR LAW: It is extremely hard to detect it. Feeding perhaps may be the best test. Better still to inject the milk under the skin of a guinea-pig or a rabbit; it would be more likely to show then than by feeding.

A MEMBER: How soon would it show?

PROFESSOR LAW: In about six weeks usually. If it

proceeds fast it might show in a fortnight. It continues inflamed where you inject this material, and a little swelling forms there; finally, when the animal dies, you find that the swelling has the cheesy character of the tubercle. On the other hand, if you feed the tubercle as ordinary food it will commonly take about three months. Of course it varies a great deal with the animal fed.

A MEMBER: How long before the disease proves fatal?

PROFESSOR LAW: It is impossible to answer that question. I have known men who were all their lives tubercular and lived to be over seventy and died of something else apparently in the end. The disease may start to some extent and remain undeveloped for years. Of course this is the exception. If you have it in a herd you will usually find one or two drop off every year.

A MEMBER: How young can an animal be to take it? How early can you discover it?

PROFESSOR LAW: They have been found before birth, but very rarely. I had an experience last summer with two calves that were under three months old. Upon killing them I found them affected in the glands connected with the bowels, and in the liver. It is very exceptional to find the disease in very young calves.

THE PRESIDENT: There will now be brought into the hall a specimen of a tuberculous lung, taken from an animal killed in this town this forenoon, by order of the State Board of Cattle Commissioners, which will be dissected and explained by the professor, immediately after the adjournment. The meeting now stands adjourned to 7:30 o'clock this evening.

EVENING SESSION.

THE PRESIDENT: I have the honor of introducing Hon. J. H. Brigham, of Ohio, master of the National grange, who will address you upon the subject of "The Farmer's Share."

THE FARMER'S SHARE.

BY HON. J. H. BRIGHAM, OF OHIO.

Mr. President, Ladies and Gentlemen:

Being myself a practical farmer, living upon the farm and sharing in its labors, in its pleasures, and in its hardships and troubles, whatever they may be, I feel a personal interest in seeing the farmers have a fair share of the goods of this world. In discussing this question, however, from the farmer's stand-point, we do not wish to be understood as desiring to deprive any man or woman upon American soil of a fair reward for labor, in whatever field they may enter. We realize that if we are to have the great country and the grand people that we hope to have, that all the different industries of our country must have a fair and open field, and an equal chance in the race of life. The farmers, or the men who first settled upon the rocky shores of the Atlantic, were men who came there seeking homes, seeking a country where they could worship God according to the dictates of their own conscience. They were farmers; they expected to obtain the wherewith to sustain life from the soil of this new country. They were diligent, earnest, faithful workers. They cleared away the forest, drained the swamps, opened up the way for every other industry or profession in the land. The farmer was, in a peculiar sense, and has always been, in a peculiar sense, a pioneer to open up the way. The farmers have done their full share of this work. They have endured their full share of the hardships incident to pioneer life. No one will question that. But for their labors, but for their endurance, this country to-day would be a howling wilderness instead of a fair and beautiful country covered with happy homes, as we see it now.

When the time came that it seemed necessary to throw off the yoke of the mother country and form a government of the people, the farmers were the first and foremost in that

struggle. It was the farmers of Lexington that fired the shot that rang round the world. During the seven years of war that followed, the men who were bravest among the brave, most patient in endurance, were the men who came from the farms along the Atlantic coast. They never ceased to battle until victory perched upon their banner and they and the world realized that a new nation had been born. When the war ceased, it was the farmers who gathered together and framed the constitution, the fundamental law that was to govern the nation. Farmers met in their council chambers and framed laws in accordance with that constitution. Farmers were chosen to execute the law. Everywhere, in every place of honor and trust, was found a fair share, at least, of the patriotic and intelligent farmers of this new republic.

During the years of progress that followed, it was the toil and skill of the farmer that wrested from mother earth her richest treasures, and made this nation a nation indeed.

When the war of 1861 came, when our institutions were subjected to the severest tests, the men who left their homes to fight their country's battles, to follow the flag, were largely the young men who went out from their farm homes all over this great land of ours. And in that struggle, as in the first, the farmers' boys were found to be among the bravest, the truest, and the best of the patriots who followed the flag. They never ceased to follow that flag until every other flag had ceased to flutter in the breeze. [Applause.] And the old world realized sorrowfully that this young republic, that this experiment, was to continue; that we were to be, not a dismembered country,—but a united, strong, aye, the strongest, and eventually the richest and grandest, nation upon the face of the earth. They realized that. We have realized in some sense the grandeur of that victory, which has made us one people from ocean to ocean and from lake to gulf. When the war ceased, and when we realized that we had piled a debt mountain high upon our people, when we realized

that our credit had been subjected to the severest strain, these men, who had fought and won the victory, went back to their farm homes and labored to restore the credit of the nation and discharge every honest debt incurred to save the nation's life. It was the labor and the skill of the farmers that enabled the government to resume specie payment, and say to the world that our paper and our promise is as good as the gold itself. The farmers certainly produced a large share of the wealth that was necessary to meet these obligations. They were industrious and prudent, good citizens, helping on every public enterprise, as well as looking diligently and carefully after their own work, their own chosen business and profession.

They did more than this. We all realized that when the war ended, when peace was restored, that it was peace resulting from victories on the battle-field, and that there was a bitterness of feeling existing between the different sections of our country. We realized, or thought, at least, that it would require generations of peace to heal the wounds and ravages of war, and reunite our people. Other institutions, political parties, churches, were doing very little to restore harmony and bring about a fraternal spirit. At that time the farmers of our country conceived the idea of forming a great fraternal organization, an organization that would reunite in heart and in sympathy the people of all sections of our country. They formed this organization, they brought into its ranks those who wore the blue and those who wore the gray. They stood around the same altars, listened to the same charges; took the same obligations, learned to sing the same songs, and in a few short years, a quarter of a century, we find to-day a fraternal feeling that unites and binds our people together as they were never united and never bound before. [Applause.] It is one of the greatest and grandest and most patriotic works in which any people or any class ever engaged.

I have said this much by way of showing, or trying to

show, that the farmers, the patient, toiling farmers of our country, have been patriotic, have been industrious, have been true to every duty imposed upon them as American citizens. They have performed their full share. They have helped to fight the battles, to win the victories; to pay the debts, to establish the credit of our country. They have wrested from the soil the billions upon billions that have been accumulated in our country, making us to-day the richest by far of the nations of the earth. Is it not right then, is it asking too much, to say or demand for these men and these women a fair and honest share of what the harvest yields? Is it not their right, they who by patience and toil produced a large portion of this wealth,—is it not right, is it not just, that they should ask for themselves, for the use of their families, to educate their children, a fair share of the wealth which they themselves have produced? It seems to me that all must admit the justice of the claim. I am not an alarmist; I do not believe the farmers are standing right on the verge of ruin, just ready to tumble over,—but I do believe that in these latter days there have been combinations organized which have wrested from the farmer the fair share that belonged to him. I believe the farmers have been piling, mountain high, wealth which other people who have not earned it are enjoying to-day.

I sometimes illustrate what I mean by referring to the bee-keeper and the bees. It is a plain and homely illustration, easily understood; yet it seems to me the comparison is a good one,—the farmers and the bees. The bees are very industrious. You know they start out in the spring-time, when the sun dispels the frosts of winter, and they fly from flower to flower all the day long, gathering up the sweets, carrying them home to store them in the hive, collecting for the use, as they suppose,—if they think at all, or as instinct teaches,—of their own families. Whatever understanding they have must be to that effect and purpose. The man who sits on the porch in the shade, those long

summer days, reading the daily news and enjoying himself, listening to the music of his daughters playing the piano in the house, understands perfectly well that those innocent, industrious bees are working for him, and along in the autumn time, when their labors are ended, he goes down to the hive, peers through its glass windows. What does it mean? He wants to find out how much honey is stored in the hive. He wants to know how successful those bees have been during the summer days. Why? He is proposing to take from that hive all the gathered stores which he thinks they can spare, and convert them to his own use. He does not want to take so much of the proceeds of their labor that they will starve to death before another spring. He does not care if they come out of the winter lean and lank and hungry. He wants them to be alive and ready to work, because he wants them to work for him another year. Those bees understand when he commences this operation, they understand perfectly well that this is something out of the usual order. They feel like protesting against it. They are alarmed; they buzz and they threaten. And I am reminded of the farmers, who buzz and threaten and bluster sometimes. This man, however, understands how to handle these bees just as well as other people understand how to handle the farmers. He takes out his smoker and smokes in their faces, and then [applause], instead of concentrating their power upon some vulnerable spot of this man's person and protecting their gathered stores, each bee forgets all about the interests of the public, of the colony, thinks only of filling his own individual sack with honey, and when he is working on that line, the bee-keeper carries away all he thinks they can spare; and then he is satisfied, he feels very comfortable about it. Shortly afterwards, the bees get over their lethargy, the smoke clears away from their vision, and they look around to see what is left. They find their sweet stores are gone. They find the results of the year's labor have disappeared largely, and they thank God that they have

got the hive left. [Applause.] Well, that reminds me of the farmer very much. He, too, starts out in the spring-time, when the frosts of winter are disappearing, full of energy, full of vim, full of hope. He not only starts out himself, but every one in the house starts out,—the boys and the girls and the good wife, early in the morning, in the spring-time of the year. What for? What do they seek? Why all this earnestness, this zeal, and enterprise? Why, they are going to gather the wealth that will give to the good wife some of those things that she has worked for and waited for so long, in the home on the farm. The boys and girls are expecting to get the wherewith to obtain an education that will fit and prepare them to meet all the requirements of good citizenship in this country of ours. The husband and father hopes to reduce the mortgage that has hung for many days and months and years over the home. They labor diligently and earnestly. Heaven smiles upon their labors. They gather a bountiful harvest. The granaries are full to overflowing, and they congratulate themselves upon the great success that has attended their efforts. But too often when that surplus is marketed, and the final round-up of the year comes, as the western stockman would say, they find very little left for the objects for which they labored. They find themselves, like the innocent bees, just where they were the year before. They find that others, from the results of their labors, fill their coffers full to overflowing. They find that others have gathered the profits, not only of their own labor, but that which ought to have gone to the farmer himself.

There is too much truth in this illustration, in my opinion. There is not a fair share left for the farmer when all the demands of business, society, and the state have been met. It is the business of the farmer to find out just who is getting more than his fair share, just who is better paid for less work than the farmer himself. That is our business. We should be willing to pay all who serve us fairly and honor-

ably. We have no right to be greedy and grasping and want that which belongs to others. But we have a right to demand the fair share which belongs to us ; and it is a burning shame and disgrace to farmers themselves, if they will submit to unjust exactions when they have the power to prevent them.

I have not time to go into details to show just where these profits go. The gap between what the producer receives and the consumer pays is too wide in many instances. The farmers get a cent and a half, two cents and a half, three cents, perhaps, for good fair steers. The consumer who goes to the butcher-shop pays twelve and a half or fifteen cents for steak, just about the same as he did when the farmer got a great deal more. I just use that for illustration. Butchers are no worse than others in this respect. I remember riding from Toledo with a man who was in the butchering business ; bought of the farmer, took the carcasses into that city, and sold them. I talked with him, in order to get a little information about the business in which he was engaged. I asked him if it paid. That is about the first question that an American citizen asks. He said, "Not very well." "What is the trouble? Don't you get fair prices for your meat?" "Oh, you would be perfectly surprised to see what prices these farmers have the face to ask for their cattle!" "Is that so: asking too much?" "Yes, rather too much. They are hoggish." "Well, what did you pay for this steer that you took in this morning?" "Oh, I had to pay twenty dollars for him!" "Well, what did you get for the carcass?" "Well, I got thirty dollars for the carcass." "And you have got the hide and tallow left." "Yes; that will pay me for the work, probably." "You have made ten dollars, then, on this steer." "Yes." "Your capital has been invested twenty-four hours and you put in three hours' work and made ten dollars. What do you think the farmer made who kept that steer until he was two or three years old and sold him for twenty dollars?"

This man seemed to feel aggrieved. He felt as though the farmer was greedy, and yet the farmer that sold him that steer for twenty dollars sold it for less than it actually cost. That is one illustration.

We find ourselves surrounded by organized forces, by men who meet in some associate capacity and undertake to regulate the management of their business. They undertake to fix arbitrary prices upon what they produce, and they succeed very frequently. They do not propose to work and take the chances of profit by competing in a friendly manner with each other, but they propose to make such arrangements as will insure to them a good profit upon their business. If they are selling anything, they put a price upon it that will insure the profit, and they undertake to control the sale.

I remember one case that illustrates, and it is only one among ten thousand, if not a hundred thousand, that is going right on to-day in this country. I spoke at a meeting of farmers, and then went to dinner with an old friend that attended school with me during the few weeks I had an opportunity to attend school when I was a boy, and he called my attention to the method of the Arbuckle Brothers in selling their coffee. He says,—"Here is something you grangers ought to do something about," and he told me what the arrangement was. They fixed the price at which their coffees should be sold, and they insisted that the local dealer should sell at that price. If he sells for less than that his name is put on the black-list, and no wholesale dealer is allowed to sell goods to him under the penalty of having the privilege of selling the Arbuckle coffee withdrawn. The profit fixed in the town where this man lived was thirty-five per cent. Now there is no risk in the business: just have to take it down and hand it to the customer and take your money. This gentleman said he was willing to sell it for less than that, that he thought it was too much, and he did sell it for less than that, and when he sent on an order for

coffee he received notice from the wholesale dealers that they could not furnish him with any more Arbuckle coffee, and they sent him a black-list circular with his name and others upon it, and they were forbidden to sell those people Arbuckle coffee.

Well, my friend got all the coffee he wanted. It was put up in boxes, and shipped to him marked "Boots and Shoes," and they sent detective after detective to find out the way in which he obtained the coffee. Well, it seemed to me to be an outrage. I am not giving any fairy tale: I am telling the truth; of course we are all George Washingtons in that respect, only we might say we can lie but we won't. I am telling an actual fact. I thought it was an outrage, and I felt as though there ought to be something done about it. I felt very weak individually, but I knew there were a large body of fellows in the country, and if they would feel about it as I did I thought it might make a difference about Arbuckle Brothers. So I wrote the matter up, sent out circulars calling the attention of the farmers to this matter, and suggested that they join me in getting along for a few weeks, or months, or years without using any Arbuckle coffee. I stopped using the coffee. A year ago I got a letter from this man, calling my attention to the fact that some other goods were sold in the same manner. These were a large line of patent medicines, sold exactly on the same principle, only the profit was much more than thirty-five per cent. He said,—"I wish you would do something about this. I never wrote you the results of your efforts in the Arbuckle coffee business, but within ten days after your circular went into print I received a personal letter from Arbuckle Brothers themselves, saying that I could have all the coffee I wanted, and sell it just as I pleased. [Applause.] They realized their danger. They understood perfectly well that if the vast army of farmers in this country should stop using coffee sold under such restrictions, they would be bankrupt.

Now that shows how it is possible for farmers to prevent the many impositions that are placed upon them of the same character. The manufacturers associate themselves together. Great corporations are formed, and these corporations associate together and undertake to regulate and control the business and fix the prices for the whole nation, if not the whole world; and on every hand we find professional men with their associations, combining, meeting together for consultation, and agreeing to stand to certain arrangements for the purpose of securing better compensation for their services. It has come to such a stage that the farmer finds these combinations whichever way he may turn. There is no possible escape during his life, not even then, because after death, when we have ceased to struggle with these associations and combinations, we fall into the hands of one of the strongest of all, and that is the Funeral Directors' association, and if there is anything left of the estate for the wife and little ones when they get through, it is a wonder. [Applause.]

So strong is this organization that no member can do business in any section in this country where I have visited—and I have been in most of the states—that they cannot buy goods of any wholesaler or manufacturer, and I have a friend who is selling their goods; he tells me in confidence how they manage. They go right by a man who is not a member of the association; he can buy absolutely nothing unless he is endorsed by the regular association. I am referring to this to show the conditions, and to show the reason why there does not seem to be a fair share left for the farmer.

It is absolutely necessary for the farmers to give special heed to these matters, to look very carefully after all the details. We must not neglect the farm; we must be thorough, diligent, and methodical in all our labors there; but we must not neglect our other interests, which come so near to us, and from which there seems to be no way of

escape except through organization and intelligent coöperation among the farmers themselves. I am enlarging upon this particular subject until you will all be weary, and I will pass it by.

There is another question that ought to interest farmers. They have done their fair share of the patriotic work, and of the tax-paying, and of the burden-bearing, and they should insist upon a fair share of the honors distributed among our people. These is no reason why farmers should be passed by when these honors are to be distributed. We cannot afford it. We cannot afford to let it be understood that here is a body of intelligent, patriotic citizens who are to be ignored when other men are honored with official positions. We cannot afford to let that be understood; it would be a disgrace to the farmers. And yet, in many sections of our country the farmer is passed by. When it comes to law-making, the farmer does not perform his fair share of that work in the nation. I have been, as some of you know, for some years a member of the legislative committee appointed by the National grange. It has been the business of that committee to visit Washington during the sessions of congress, and present to the various committees the desires of the farmers of our country favoring legislation in the interest of agriculture and opposing legislation not in the interest of agriculture. I have been before the committee of agriculture of the house, the popular branch of congress—I have been before that committee when there was hardly a sure-enough—as the Southerner would say—farmer on that committee. Just think of it, this great industry, this foundation industry of our country, without a single, or more than one or two, representatives on the committee of agriculture in the house of the national congress, and not for years a single member upon the committee of agriculture in the senate. Now, is that right? Is that fair? Will agriculture receive a fair share of attention and consideration under these conditions? I believe not.

I remember particularly one winter, that the most talkative member of that committee, the man that had the most to say, was from the city of New York, in the vicinity of Five Points,—there is such a place as that, I think,—and he admitted, in private conversation, that he knew absolutely nothing about agriculture except what he could see in travelling from the city to the capital of our country. Yet he seemed to think that he understood it; he seemed to think that he knew what would be for the interest of the farmers and of agriculture. I find there are many like him on that committee, and it is hard work, very hard work, to present views and wishes of farmers to the minds of these men, while on the other side are the sharpest, keenest, shrewdest attorneys that those interested in opposition can hire to serve them. They present their arguments so shrewdly, so carefully prepared, that they are calculated to deceive even the very elect, the farmers themselves; and it is no wonder that these men from the cities are in doubt as to what they should do.

I went back, a year or so ago, before the same committee, and I met there the strongest body of men that I ever met in opposition to a measure which I believed to be just and right, to prohibit this gambling in farm products. [Applause.] I want you to adopt a resolution expressing the sense of this meeting on that question, and forward it by telegraph to your senators. They are glad to hear from us, and we want them to hear from us. They were able men, and for six weeks I listened to their arguments. I was enlightened in some things. I found that there were some sides to this question that I had not considered. I always like to hear all sides discussed. And I was glad of the opportunity. But one thing I noticed particularly in all the arguments made by these members of boards of trade and their attorneys that represented them : I noticed that they did not in any case appeal to the committee to make an unfavorable report because it would interfere with

commissions received upon sales of farm products. Oh, no; their whole argument was to convince the committee that it would ruin the farmers to have this measure pass. They were there defending the farmers, and talking for the farmers, and telling what ruin would follow the passsge of such a measure to the farmers, not to boards of trade, not to gamblers in farm products.

Now, you see the necessity of having on the committee men who can detect sound argument from sophistry. There were solid, substantial farmers there. It required no argument upon our part to meet the sophistical arguments of these gentlemen, none at all. They understood it. They knew of themselves what there was in the arguments presented. But there were many members on that committee who had been with the farmers, as they thought, and had been in favor of this bill, who were actually undecided when they listened to these arguments, and it took the strongest arguments that could be made from the other stand-point to get these men to support the measure. But I am glad to say, for once at least, that although they had great ability on the other side, and although the farmers were represented by two or three practical farmers, without experience in lobbying, without education in that line of work, we met them there on their own chosen ground, and routed them completely. [Applause.]

Now it was not because of the strong arguments or great ability of these men that were there to represent the farmers; it was not that that gave the victory; it was the knowledge that these men had, that back of these plain farmers was an organized army of men, with their tents pitched in every congressional district in the land. That was the force and power that gave us the victory, and that will be the force and power that will give the farmers every victory for right against wrong in the future of our country.

Now, it seems to me that our farmers are to blame for this. I am not blaming these other gentlemen for accept-

ing the position. We crowd them upon it; we force them to take it. There were two men in the very last congress representing agricultural districts, one of them a member of this committee of agriculture, and one of the very best representatives in that body, a man that does not agree with me on political questions or on party questions, but he was a fair man, an able man, a man who worked earnestly, early and late, in the interest, not only of the people of his own constituency, but of the whole people. He was faithful; no one questions that. But when the people got together in his district—not a word said against him—they quietly let him drop and put a young lawyer in his place. Another gentleman there from Kansas, member of the People's party, representative of an agricultural district. This farmer, standing on the floor of the house, had said in a little speech that he had made to the gentlemen who proposed to revise the tariff: "Gentlemen, I am in favor of revising the tariff, and reducing it; but I want you to take just as much off the manufacturers as you do from the farmers. You have got a bill that removes all protection from the farmers and does not interfere at all, or very little, with the manufacturers, and I cannot support it. I am a farmer, representing an agricultural district." And he went back home, and that very speech and vote defeated him for renomination by the farmers, and they put a young doctor in his place. I simply refer to this to show the amount of work that is necessary, and the fact that it is the farmers themselves who are largely to blame that they do not get a fair share of recognition and a fair share of the wealth they produce. I do not wish to leave the impression that I am complaining of you as farmers, or that I am complaining of anybody else because they look after their own interest, because they accept honors that are forced upon them, because they secure for their wives and for their children a good fair share—a little more than a fair share if they can get it—of the wealth we produce. But I do find

fault with the farmers of this great country, who have the power to secure what is theirs by right, because they fail to use that power. Farmers must not only look after this matter of sharing in the law-making power, having a fair share of representation in order that they may equalize the burden of taxation and equalize these conditions that seem to be unequal and unfair—and we must insist upon that; we cannot afford to have taxation without representation; we must have our fair share of these honors—but they must accept also a fair share of the responsibility that comes with them. We have a government by the people, and for the people. Farmers constitute nearly fifty per cent. of the people. We are largely responsible for the government that exists to-day. We are responsible for its abuses, for its shortcomings. We are responsible largely for the corruption that is said to exist in the politics of the country. We cannot afford to go along through our lives and fail to meet our share of the responsibilities that belong to American citizenship. We must perform our fair share of the work that is necessary to give our whole people a government. We have got to meet some of these important questions. We have got to discuss them; we have got to investigate them; we have got to decide some of the issues that are raised in this country.

We note with anxiety the differences which exist between capital and labor. We see that therein is danger to the peace of our country as well as to its prosperity. We are in a position to judge fairly of the matters that are arranged between these classes. We sympathize, of course, largely with the men who earn their bread with their daily toil. Our sympathy will go out with the laborers,—to those men whose labor largely creates the wealth of these great manufacturing centres,—but we cannot afford to nor will we indorse methods that are not right, that are not just, that are not fair, that are not lawful. [Applause.] We cannot afford to do that. It would be an injury, not only to capi-

tal, but to labor. We must stand for the right, the rights of all, and we must insist upon the right of labor to organize to promote the interests of labor, to protect the interests of labor. We must also insist that in their organized capacity they shall not encroach upon the rights of capital, or of those who are not associated with them in their organizations. The right to labor in this country must remain free. [Applause.] And the laborer, if he sees fit to organize and join associations in the hope of benefiting himself, must have the right to do that; but if he thinks it is best for him to stand outside of these organizations,—if there is something in their rules which he cannot subscribe, which he believes are not for his interest,—he has the right to refrain from associating with this organization, and go out and earn his bread and the money that is to clothe his family in any field of labor where men desire to employ him. [Applause.]

It is a fact, as I believe, that as the country grows in wealth, and as wealth grows in power, there is a tendency, I believe, to oppress, there is a tendency to become more and more grasping. There will always be a struggle on the part of producers to secure a fair show, to secure fair pay in this country. Capital, handled and controlled by individuals, is sometimes too exacting. It sometimes defies and overrides the will of the people. We must hold to strict account the men who have by some means secured a large amount of wealth, because wealth is a power in this country; and this great mass of people who own their homes, who are not wealthy, must use their power to protect the rights of labor, the rights of producers, against the encroachments of capital.

These are some of the responsibilities which we must take upon us. Dangerous elements are centered in the great cities. Danger comes to us from almost every country in the wide world. There are agencies and influences to-day that threaten those things that you and I most revere

in this country. We cannot afford to shut our eyes to these facts. It is absolutely necessary for the farmers to investigate, to study, to become acquainted with all these conditions of society, in order that when the time comes that these things must be ejected and restrained the farmers can do their fair share of that work. This country cannot preserve its freedom and its grand institutions without the assistance of the intelligent farmers. These are the questions that the farmers must consider. These are the responsibilities that the farmers must meet. Years ago it was said that eternal vigilance was the price of liberty. It is true to-day, as it always will be. We cannot afford to depend upon others to protect our rights. We cannot afford to depend upon heavenly power to do that for us. Most of our people have at one time and another in their lives prayed for assistance, for help. That is all right; but it is utter folly to pray to God or any other being to do the work we must do ourselves. [Applause.] No farmer would think of praying in the springtime for the Lord to plough the furrow or plant the crop or tend or harvest it. That is your work. The Lord may be depended upon to send the sunshine and the rain in its season, but never to do your work or my work.

And so it is with all these questions of public policy and of public interest. It is all right to pray,—pray for help and strength and goodness; but when you have done that you must buckle on your armor and get ready to fight for what is yours by right. I do not mean that you are to shoulder your muskets and buckle on the sword. That is not the kind of warfare that is needed in our country to-day. What we need is strong men and brave men, who dare to stand up, even in the face of their own party if it is necessary, dare to stand for the right, dare to stand against prejudices that have existed for years perhaps. It will require courage on our part. I am talking now of the courage of the men. If we could only have the help of the intelligent and patriotic

women at the ballot box, I think a large part of our troubles would disappear. [Applause.] Of course we are not all unanimous upon that question. I do not know that we are ready for it, but I do believe that a large share, a very large majority, of the women, of the mothers, of the wives of this country, would have sense enough, when they come to the ballot box, to do what they believed to be right whether it is good policy or not. [Applause.] That is going to come sometime. When they want it no power on earth can prevent it. I do not know but that we shall have to appeal to them to come to our help in the government of this country, and protect its homes. There is a very good work being done along that line in this country.

These are some of the thoughts that occurred to me when I selected this subject. I desired at the outset to show that the farmers were entitled to a fair share for the work they have done in this country, for their patriotism, and all that, and that they are entitled to a fair share of the work they themselves have helped to produce, and a fair share of recognition. It seems to me that every intelligent person will admit the truth of these claims. I do not think I have been extravagant. I do not think I have asked more than is right and just, and I am sorry if I have, because I believe the farmers make a mistake when they demand what is more than right. I think we are sometimes extravagant ; I think we ask sometimes for those things that might do us harm, because we have not fairly and fully considered them. We make some mistakes, like other people, but I am very sure that every intelligent person present is satisfied that the farmers of this country are entitled to a fair share of the profits of their labor, to a fair share of recognition, and that they have a great and grand work to do in this country. If we could only convince the intelligent, thoughtful, patriotic people of this fact, and obtain their sympathy and help in an effort to bring about conditions, we are sure that we should succeed. We have a great many people in our

country who are not ready for reforms of this kind. They are not ready to grant claims that are just and reasonable. We have men among the farmers who are way back, who are sometimes called "moss backs" or "hay seeds." Sometimes they are described as "grangers." That is not fair. That description comes from people who do not know anything about grangers, for they have been going to school for a great many years, and they know more than they did when they commenced. But we have people who do not attend these farmers' gatherings. They pay no attention to the calls of society. I do not know whether you have any in New Hampshire, but I suppose you have some concealed among the hills. They are not at this meeting. You do not find them at public places. You find them sometimes at the ballot box. They come out and vote, without knowing why they vote, sometimes. It is hard to reach them directly, but we hope to reach them indirectly through the intelligent, patriotic people who will reason, read, and investigate.

I remember an occasion where one person of this character was converted. He came into town to the store where he did his loafing. In every town at such places you will always find fellows sitting around on nail-kegs, whittling a shingle. He came in one day, and was listening to what was going on. That was the way he got his information. He did not read much. It happened they were discussing, that day, something he had never heard of before, something entirely new, something he did not understand. Of course he was at once interested, and he gathered, after a while, this fact,—that his neighbors around there believed that it was possible for people to converse with one another, although separated by twenty-five or thirty miles, and recognize the tones of the voice, know with whom they were talking. He got that impression I say, and he was perfectly astonished and indignant to think that his neighbors would believe any such nonsense as that. He thought it was

impossible; it was "agin nater," it could not happen, it could not be; and he protested very vigorously because they accepted as truth the statements that were made, that they could talk with people twenty-five or thirty miles away. Some of his neighbors happened to know that his Aunt Maria was visiting a town about twenty miles away, with which they had telephone connection, and they said to him, —"We will summon Maria, at the other end of the line, and you may talk with her over this telephone, and see if you do n't recognize the fact that it is Maria, and no mistake; see if you do n't recognize the tones of her voice. We believe it; but in order that there may be no mistake, you talk about something that nobody knows anything about, except you and Maria." He could not well refuse to make the test, and when they told him that Maria was at the other end of the line, he came up to the telephone and placed it at his ear. He listened attentively, but nothing came. They told him to call, and ask if it was Maria. So he says, "Hello, hello, Maria; is that you?" Just then there was a thunder-storm in progress. The lightning came down the wire, and knocked the old man down. Of course, this surprised the whole party. The old man did n't know but that was the regular thing for the telephone to do. The rest knew better; the rest knew that it was out of the usual order. The old man gathered himself up, looking very much ashamed and grieved. With all his faults, he was reasonably honest; and he looked around among the neighbors, and said, "Gentlemen, I give it up. That is Maria." [Laughter.] There was one moss-back among the converted, but it took a stroke of lightning to do it.

I have suggested some things that it is necessary for us to do, some things that I believe in fully. Now, are we going to accomplish anything? There is just one way open to the farmers—we must help ourselves. Nobody is going to help us. How are we going to do it? We must put ourselves into condition where we can help ourselves. We must

organize thoroughly and discipline our forces, coöperate intelligently, and when we are ready there is nothing that is nothing that is right, or just, or reasonable, which the farmer may not hope to obtain. We cannot wipe out other combinations ; we cannot destroy the power to organize ; we have no right to do that. Men have the right to associate for mutual benefit and protection. So long as they obey the law, we cannot prohibit that ; but we can bring together those men and women who live on the farms, on the hillside, on the plain, organize them and let them study, investigate, think, and decide for themselves. We can open up schools and educational organizations which the farmer may enter with his family, and from which he need never graduate until his life-work is over. I believe here is a grand opportunity for every farmer to-day, a work whereby he can benefit himself, his family, and his country. I do not believe that this organization would have a narrowing tendency ; I believe it would have exactly the opposite effect. Its purpose and object, is described by some orator, I do n't recollect his name, but it seems to contain it in a nutshell,—we want to teach the farmers to look forward, not backward ; to look outward, not inward ; to look upward, not downward, and lend a hand.

You have represented here an organization of that character. It is to become a great power in the old Granite state. I can remember how I used to like to hear those people sing, that came from up among the hills here, out in Ohio. I always like to hear the Hutchinson family. I got a grand idea, just from those songs, of the old Granite state, and I have never lost my admiration for the state ; it grows stronger and stronger when I see the farmers of New Hampshire organizing, associating themselves together, to help one another. It gives me a brighter and grander idea of the state and its people than I had before. You have become a power here ; you are doing grand work ; I do not need to tell you that. You know what it has done for New

Hampshire, socially, intellectually, morally. You cannot bring farmers together, with their wives, sons, and daughters, in an organization where the moral influence is not good. You have become a power here. You have just commenced your work. You are getting ready for the grand victories yet to be won. I am glad to see this work go on. This organization may interfere sometimes with the plans of other men, may sometimes interfere with the political plans of this country; because, while our organization is not a partisan organization, while it will never become a political party, it will be one of its great and grand objects to teach farmers to use the great power placed in their hands to protect themselves, to protect the right, to uphold law, and to preserve order in our country.

We will teach the farmers to think and decide for themselves, rather than to allow the party organization to dictate and control their actions so fully as they have in the past. It may result sometimes in temporarily shaking things up a good deal. Sometimes these farmers may kick clear out of the traces, and do some things that may not seem for the time being the wisest and best that might be done. It would not be strange if we did do that. We are not quite so frisky as some of our friends engaged in other occupations. I sometimes think that farmers are a little slow, hard to start, like the patient ox, bear burdens for a long time with great patience. But mind you when the ox-team does run away, something smashes every time. If we do get loose, there will be considerable shaking up, and some of the political leaders will feel very much embarrassed when the thing is over, feel as some of us did after the eighth of November last—I believe that was the day—I am not certain whether there was any election on that day—I think there was. That reminds me of a story of a bird. It was a very intelligent bird, but it had a bad habit of swearing. It was very profane, and indulged in its profanity on all occasions. It had been taught to swear by an owner who was a swearing man

himself. But it passed into the ownership of a man who was an elder in the church, and of course it did n't sound well to have profanity around his house. He liked the bird, admired the bird, but did not like the profanity, and he thought it would be a good plan to break this bird of swearing. So he called his friends around and discussed the matter. One of them suggested that he get a tub of water and set it handy, and when the parrot would commence to swear, to take up the cage and thrash on the floor a few times, one side and then the other, and douse it into the water a few times, and he had an idea that the parrot would take the hint and stop swearing. He thought it was worth trying. He got a tub of water ready, and the next time the parrot greeted him with a blankity-blank lot of oaths, he said, "Now I will show you, young fellow." And he grabbed the cage, thrashed it on the floor, dashed it into the water, time and again, until the cage was jammed out of all shape, and the parrot was apparently dead. He was feeling sorry about it, thought he had overdone it. The parrot was apparently dead. Directly he shivered a little, by and by opened one eye, peered up ; then the other, seemed to shake a little, came to himself, saw his master standing there, looked up at him and said, "Where in the blank-i-ty, blank-i-ty, blank-i-ty were you when the cyclone struck us ?" Well, I think some of them felt about that way when the cyclone struck.

I believe we have got a great duty to perform along this line, and while we may make mistakes I think we will accomplish a grand good work. I am glad to have an opportunity to present a few views. I have not exhausted the subject ; but you are feeling exhausted ; you are feeling as if this long man was willing at least to inflict a pretty long speech upon you. I am glad to see that you have a strong organization, that you are co-operating with the state board of agriculture, that you are bringing to your assistance all the agencies and all the help that you can get.

That is right and proper. As a national organization we never stood better than we are standing to-day. The outlook was never better than it is to-day. We have been careful and conservative. We allow our members absolute freedom on all religious and political questions. We do not dictate to them what church they shall unite with, or whether they shall unite with any. We do not interfere with their political freedom in any way, shape, or manner. But we try in our associate capacity to urge and stimulate all to do their whole duty as good citizens, husbands, wives, sons and daughters, and as members of society. We are doing a grand good work, and I want every member of the order to feel encouraged, to feel strong. We are ambitious. Every man that is worth living, every woman that is worth living, has some ambition—ambition to do some good, something that will call them to be remembered. Farmers sometimes think that great things are beyond their reach. But it lies with every farmer, and with every farmer's wife, son, and daughter, to do a grand and good work that shall reach far beyond their own homes. The influence which we exert throughout the length and breadth of our land, in establishing an organization such as this, will exist long after we have ceased to live and labor. This is something that ought to stimulate the ambition of all. And I am glad to give this encouragement to all members of the organization, and, in conclusion, I invite all those who are interested in agriculture, who would like to help themselves and to help others to do a grand work, to join hands with the brave men and intelligent women who are pushing forward the work so successfully among the granite hills of New Hampshire. [Applause.]

Mr. Mann: I attended a meeting last Monday evening where we celebrated one of the most notable events in the history of the world. We had a celebration in memory of something that took place 1,892 years ago, when the angels

came forth and shouted, "Glory to God in the highest; peace on earth and good will to men." I know when that proclamation was made by the angels it had a reference to farmers, and it has been handed down from generation to generation, and to-night we have heard a proclamation made from Ohio in unison and harmony with that proclamation made over eighteen hundred years ago, "Peace on earth, good will to men, and equal rights to all."

When I got up Tuesday morning, and left that old home 150 miles from here, under the shadow of old Moosilauke mountain, in sight of the Old Man of the Mountain, and wended my way down through these valleys, and over into this little quiet town, I felt somewhat that I was a sheep straying from the fold. But when I get here and find a great many shepherds, thank God, I am willing to go into Peterborough. Now, I intend next summer to go out to Chicago, and I shall feel perfectly safe if I stray into a hotel and run across this gentleman who has set forth to us the immortal principles we should maintain and teach our boys. There are a good many who tell stories of what they did when they were boys, what good farmers they were, and what good boys they will be if we will only vote for them. Let us send some of our own organization to Washington, and we shall hear it announced in Washington, "Glory to God in the highest, and peace to the farmers of the United States."

I have been perfectly carried away with the remarks that have been made. It gave me great pleasure, when the invitation was given, to shake hands with the gentleman from Ohio. He has come into the old Granite state and advocated what is right and just, and he has set forth our duty with wisdom and spirit. Let us send this gentleman through the nation to proclaim these good tidings which have been set forth here this evening.

THE PRESIDENT: This closes the exercises of this meeting. In behalf of the Board of Agriculture, I desire to

express our appreciation of the courtesy and kind treatment we have received at the hands of the people of Peterborough. Especially are our thanks due the Grange choir, that has furnished such excellent music during each session, and to the Grange, for providing such a fine banquet on this occasion.

THE SECRETARY: In line with the remarks just made by the president, I desire to suggest that it is only just that we make an expression of our appreciation of favors received at the hands of the Grange and citizens of Peterborough; therefore, I offer the following resolutions and move their adoption:

Resolved, That we extend our appreciative thanks to the Peterborough Grange choir for the enlivening, inspiring, and highly enjoyable music that has been so kindly furnished for this meeting.

Resolved, That we express our sincere appreciation of the efforts made by the Peterborough Grange, by the citizens of Peterborough, and the proprietor of the hotel, to make the meeting successful and our stay in this delightful town one of pleasure and enjoyment.

Adopted.

THE SECRETARY: I also desire to offer the following resolution, and move its adoption:

Resolved, That the farmers of New Hampshire assembled in the annual winter meeting of the State Board of Agriculture express their endorsement of the Hatch-Washburn bill now pending in the United States senate. A bill to prohibit gambling in food products, and urge our senators to make an earnest effort to secure its passage.

Resolved, That this resolution be forwarded to the honorable senators from New Hampshire, as the expression of this meeting.

Adopted.

THE PRESIDENT: I declare the meeting adjourned.

MEETINGS OF THE BOARD.

MEETINGS OF THE BOARD.

ANNUAL FIELD MEETING AT HAMPTON.

The eighth annual field meeting of the State Board of Agriculture was held at Boar's Head, Hampton Beach, on the 17th day of August, 1893. The meeting was called to order by the president, Hon. Moses Humphrey, and a selection was given by the band, after which the president spoke as follows:

THE PRESIDENT.—*Ladies and Gentlemen:* This is our eighth annual field meeting. From the commencement to this time, we have found an increased interest in these field meetings. On that account the members of the Board of Agriculture feel that in the interest of the agriculture of New Hampshire, we should continue them. So we are here to-day with a number of interesting speakers, and I think you will all be interested in hearing what is said. I believe in New Hampshire making progress in agriculture as well as in everything else. There is no standing still anywhere. Standing still is death in agriculture, mechanics, or manufacturing. We want to push forward the agricultural interests of the state of New Hampshire.

I am proud to say that our dairy interests have moved forward. They have increased wonderfully in value and in every material point. When we started this Board, we hardly knew of any dairies in this state. There was a good deal of butter made in private dairies, but there was not the butter of to-day. The butter of to-day in New Hampshire takes the first premium in the exhibit at the World's Fair. There was one sample that stood ahead of New Hampshire butter; but the average of New Hampshire stands ahead of that of any other state.

I now introduce to you Mr. Hale, of Connecticut, who will give us an address upon fruit culture.

FRUIT CULTURE.

BY J. H. HALE, OF GLASTONBURY, CONN.

Mr. President, Members of the Board of Agriculture, Ladies and Gentlemen, and Fellow-Farmers of New Hampshire:

I have been invited to come here to-day, leaving my little fruit farm in Connecticut, and say a few words to you about fruit culture in New Hampshire. It is an exceedingly broad subject, altogether too broad for the time that is allotted me for a talk.

I have come to you without any preparation, and possibly I shall get as thoroughly mixed as I did in an address in Georgia two or three years ago. I was at a meeting in that state, and was invited to speak, and so I talked to them about New England thoughts and ideas, and left them, feeling that I had made quite an impression. A short time afterwards being on my farm or plantation in Georgia, I went in to dinner and my brother was left behind. One of the darkies wanted to know of my brother if that was n't Mr. Hale. My brother told him it was, and wanted to know of the darky where he had seen me. He said, "I done hear him last year make a speech, and he made the biggest speech I ever heard." That set my brother right up, and he began to inquire what that biggest speech was about. He asked,—"Well, Sam, what was he talking about?" "Oh, the Lord only knows what he was talking about; I do n't." [Laughter.]

So I am afraid that is about the way it will be with my talk on fruit culture in New Hampshire.

All my life has been spent upon a New England farm, and all my work has been along the line of fruit culture. So I have been obliged, in order to be successful in my work, to not only study the fruit culture of New England, but the fruit culture of the United States as a whole, and I find that it is drifting quite largely into centers of production, because the climate

and soil at those centers are right for this branch of farming. For instance, the apple industry has drifted to centers,—western New York, Colorado, some portions of Oregon, in large portions of Missouri, and beyond the Rockies, on the Pacific coast. The raising of peaches also has drifted into centers.

Of course, as I have said, these things are controlled to a large extent by the soil and the climatic conditions which are best fitted for the raising of the several fruits. The men are raising fruit in large quantities; they are men of capital, and they put into the work a great amount of skill and care all the way through. We find that these men are producing for market everywhere.

They are continually looking for new fields to conquer, and are branching out in every direction. If we talk with our dealers, we find that their productions are continually tending towards the New England market, because the New England markets are the best markets anywhere in the world. While there are sections of the United States that have as much money, or more, than we have to spend, they have not reached to the high average intelligence that the people in New England have perhaps. You may say that that has nothing to do with what we eat, but you will find that people of the highest intelligence generally buy the choicest fruits. The people of New England, in proportion to their wealth, dollar for dollar, buy more dollars' worth of beautiful flowers and choice fruits than any other people anywhere on the face of the globe. So I say that we have the best market anywhere, right here at our doors; yet the farmers thousands and thousands of miles away, are reaping the benefit of these markets, largely from our own neglect.

A few weeks ago, I left my Georgia farm and returned to Connecticut, but before coming I shipped some watermelons produced on the place, and bought some others. I bought the watermelons in Georgia for four cents each, and I bought one of the same melons in Hartford, Conn., paying thirty-five cents for it. The value of that watermelon had increased thirty-one cents in a week's time. Some twelve or thirteen cents went to the railroad, some two or three cents to the man who carted it and put it into the car in Georgia; another profit went

to the commission man, and still another to the retail dealer, and in between it was a little profit which went into my own pocket.

In the city of Portland, Oregon, within six weeks, strawberries have been selling at two cents a quart, and thousands of bushels have gone to decay on the Pacific coast because there was no market for them. I have seen peaches in western Idaho rotting on the ground by the bushel, because there was no market for them. And all this while the consumers here had an abundance of good money, which they wanted to pay for just such produce. Here in the East the producer who produces the finest quality will find a quick and ready market, at a fair compensation, at least, and if the goods are of the highest quality, at a very profitable compensation.

In talking to a New Hampshire audience, I do n't suppose it is much use to talk about raising some kinds of fruits that can be more easily raised, on account of the soil and climate, in some other part of the country. But there are opportunities in New Hampshire, and especially in your lower counties, for the production of choice pears and apples. Yes, more choice apples than can be produced anywhere for our market—the very finest apples produced in the United States—are produced in the western counties of Massachusetts and the southern part of New Hampshire, and you need fear no competition in the raising of such apples from any other part of the United States.

The trouble has been that all the fruits on the farm have been treated as by-products, and all that has been expected of such fruits has been to get a little for the family supply, and if there were any in excess of what the family needed that were salable, why it was so much gained.

The opportunities for planting large orchards in New Hampshire and other states of New England are to some extent limited by our small fields and the impossibility of getting any extended tract of ground to work as a large orchard. It seems to me that the tendency of the times, which is toward consolidation and coöperation in any branch of business and all lines of work, should teach us farmers to think if there is not an opportunity for us to join hands in coöpera-

tion in some of this work. Where there are two or three adjoining farms having suitable soils for an orchard, would it not be as well to associate ourselves together, as other capitalists do, and let some one of our number who has the most skill and knowledge in regard to the culture of fruits take charge of that culture? In that way you can plant your orchards in long, straight rows, running in either direction, so that it may be cultivated in the easiest and most economical way. The ground should be as thoroughly and as well prepared as for any other crop, and the trees should be planted very carefully, and should be liberally fertilized from year to year with such elements of plant food as give the best results. In our New England soil we have elements of plant food that give the finest color and texture and flavor to our fruits, and so we are not under the necessity of purchasing fertilizers for that particular part of our business.

You have here in New Hampshire large summer resorts, where people are flocking from almost all over the world, and those are the people who want your choice products—fruits, especially, and you should be prepared to supply that demand. So join in the work with your neighbors, on the coöperative plan if necessary, and by so doing you can reap a good harvest. By doing this work on the larger scale that coöperation would enable you to adopt, there would be many things that you could have for the advantageous and economical running of your orchards that would be impossible to procure by the means at the command of each individual farmer. For instance, there would be opportunities to dam the streams of your rolling country and build reservoirs of water which might be used to great advantage in irrigation. I have no doubt, brother farmers, but the springs and streams of New England will, within the next twenty-five or fifty years, be put to a better and more profitable use, by applying the waters to our agricultural interests, than they have ever been put to for manufacturing purposes. We should think of these things and develop them, and we can only do that by working together as other capitalists have.

But the great point is, if we are to be successful in our lines of work, we must do something ourselves. We cannot wait

for all these good things to come, for they will never come unless we do something ourselves and set about it in the right way. The great trouble has been with our farmers in the past that they have not given thought enough to their work. Farmers, as a rule, are inclined to work too hard and think too little. I have often said in farmers' meetings: "Do n't work so hard, and do n't get so tired out with doing just the roughest kind of work; but do more thinking, whereby you can get greater returns from your farms and greater happiness for yourselves and those whom you associate with." Your worthy president, just before he presented me, made some complaints with the way your World's Fair commissioners were treating the dairy interest, as it looks to him. As he was speaking, I was reminded that perhaps the whole trouble was not with the commissioners,—perhaps some of it was with the farmers. I was reading a little squib a short time ago. A Jew one day, on coming home to his family, was accosted by his wife: "Isaac, Isaac, I am afraid our boy Jacob is very ill; he takes no interest in noting." "Mine Gott, Rebecca, that is your poy and he takes no interest in noting? Oh, he is not shick, he is dead!" Perhaps that is what the commissioners have thought of the farmers, that they were dead. Perhaps you did not take any interest in the matter at the time the commissioners were appointed, and they thought the farmers were dead. Wake up, wake up to the possibilities there are on New Hampshire soil and farms! Do n't let them think you are dead simply from lack of interest in the business of New Hampshire farming. We have not taken interest enough in our business; we have not given it thought enough; we have been working too hard and thinking too little.

After entering upon the lines of fruit production, or upon any particular line of fruit production that may seem best suited to the individual or coöperative farmers, or that your own interest or conscience may dictate, one may be living near a manufacturing city or village, or near a pleasant summer resort, or adjoining a number of these, and it may be to his advantage to plant a variety of small fruits that have to have a near market. On the other hand, he may be a long

distance from those places, but on the line of a railway leading to some large commercial centre or distributing-point; and then, perhaps, he would desire to plant what would be more suited to his location,—apples, pears, and plums. After entering upon any such line of fruit production, turn yonr attention to that line and become a specialist; devote to that your entire thought and study.

It is not possible for me to lay down the characteristics, the advantages and disadvantages of any one kind of fruit or line of fruit production that you may desire to take up. I do not mean to say a word about the varieties of fruit or their culture, because there is not time in a talk of this kind. But there is one fruit that is coming to the front and is well worthy of attention to one contemplating planting an orchard, and that is the new Japanese plum. They have come to be pretty well known within the past four or five years. There are a number of varieties of that plum, and they are in great favor in New England and all over the world. They have an attractive color and are fine shipping and keeping fruit. They may be picked and kept from four days to two weeks. They are not of as high quality as our Chester County prune varieties, but they are far ahead of the coarse, tasteless California plums which you find on the streets of Boston.

You can make a success of fruit culture if you will, and instead of complaining of New England farming, and that there is not a cent in it, live up to your opportunities. I believe there is just as good an opportunity for a farmer to get rich out of New Hampshire soil as there is in California,—just as rich and just the same opportunities.

One of the troubles with our farmers is, that after growing the produce of the farm, they do not thoroughly understand the business of marketing. I claim it is the work of every farmer —not only the fruit grower, but of every farmer who is shipping produce to market—to learn to market his goods properly. He should spend a portion of his time in that market to which he ships, and make a study of it; study the wants of the buyers, how the produce is packed in order to attract the eye best. Make a good selection of your crops to be grown, and then after you have grown them, you can add a good deal to their

appearance by proper methods of packing. Just for a moment, I want to call your attention to quotations of the prices of apples. You will find, if you look at the market reports, such quotations as these: Baldwin apples, or Greenings, $2.00 a barrel; farmers' packings, $1.60. It makes me mad every time I see those quotations, and it is a reflection on the farmers that any man should get forty cents or thirty-five cents extra a barrel on apples because he knows how to put a little style on it. Those are things that we should know, in order to get the most profit from our work, and that applies not only to fruits, but to all farm products.

Well, what do we want money for anyway, fellow-farmers? In order to buy the comforts and luxuries of life and happiness for our friends and ourselves. But many a farmer and fruit grower, in trying to get money from his produce in order to go out and buy his comforts somewhere else, overlooks a great deal that may be had at home. I have visited farmers all through New England, and I have found that very many of those farmers do not have as many of the choice products of the soil as do the mechanic's family of the village. Upon your knees to those who see the possibilities of enjoyment there are in fruits: You have a half acre of land right close by your door. It has locked up in its bosom all kinds of fruits, that can be had almost for the asking. Take them and give your family all they can eat three times a day, and as much as they want between meals. If you are not doing that, you are not doing you duty to your wife and loved ones depending upon you. I know that we are busy men, and we have a good deal of work to do. A man may start out in the spring with the determination to have some strawberries for his family, but before June comes, he finds that there is so much care about it that he says to his wife: "I will buy all you want." But bless his stingy heart, he never buys but one mess so that his wife can make some short-cake, and of that, he himself eats three quarters, while she is so tired doing the work that she does not enjoy what little is left for her. Tear the weeds from your garden, burn them up, and plant the garden, making long straight rows, so that you can go with the cultivator right up one way and down the other. One single row of strawberries, if it is long

enough, will be enough to supply your family with all they want.

Plant some raspberries, gooseberries, two or three kinds of currants, and make your horse and cultivator take care of them.

The work of the fruit grower has been materially aided by the work of our agricultural experiment stations. The fungi and insects which have affected our plants have heretofore made it difficult to produce fruits. But we have been taught to cope with them, and we can hold them nearly all in check. And by the use of the right plant food, we can give the fruit a higher color, and we can add to their quality and flavor, and we can add sugar. We can, by the proper use of plant food, affect the quality of the fruit, just as we can the milk of the dairy by the vegetables and other kinds of food we feed our cows. The work of the farmer is not merely that of putting a plant into the ground and then collecting the fruit, after it has grown. The growing of a crop is just as much a manufacturing in New Hampshire. Nature will do a great deal for the farmer, but you have got to furnish your raw material and labor and brains to get the greatest return. There is not a manufacturer in New Hampshire that could live a month if their business was carried on in the same slipshod shape as that of many of the farmers.

But there is hope for us. It is just such meetings as this that are going to help us and wake us up. We must talk and think and then act. It does not do us any good to think about these things, unless we act upon them. I am here at some little expense to the board of agriculture, and at some little inconvenience to me, but if I have said one word that will in any way aid you upon your farms, I surely shall, and I think the board will, feel repaid.

But I am afraid some of you are saying: "It is a great speech, but I don't know what you are talking about."

The President. I now have the pleasure of introducing to you an ex-speaker of the house of representatives. He was speaker of the house in 1858–'59, I think. He is now on the forestry commission, and he is here representing that commission, and will speak upon a subject that is of interest to all the people.

It is a subject that has been talked a good deal about, but there has nothing been done about it by our state until now, when it has appointed a forestry commission, and Mr. Bryant is here representing that commission.

FORESTRY.

BY HON. N. B. BRYANT, OF ANDOVER, MEMBER OF THE NEW HAMPSHIRE FORESTRY COMMISSION.

Mr. President and Fellow Citizens, Ladies and Gentlemen:

The legislature of 1893 passed an act creating what is called the forestry commission. I will read one of the sections of that act which covers most of the duties expected of that commission, in these words:

"It shall be the duty of the forestry commission to investigate the extent and character of the original and secondary forests of the state, together with the amounts and varieties of the wood and timber growing therein; to ascertain, as near as the means at their command will allow, the annual removal of timber and wood therefrom, and the disposition made of the same by both consumption and manufacture, as well as by exportation in the log; the different methods of lumbering pursued, and the effect thereof upon the timber-supply, water-power, scenery, and climate of the state; the approximate amount of revenue annually derived from the forests of the state; damages done to them from time to time by forest fires; and any other important facts relating to forest interests which shall come to their knowledge. They shall also hold meetings from time to time in different parts of the state for the discussion of forestry subjects, and make an annual report to the governor and council, embracing such suggestions as to the commission seem important, fifteen hundred copies of which shall be printed by the state."

Section 3 provides that the selectmen of the towns shall be wardens; that it shall be their duty instantly, and at all times, to hold themselves in readiness, calling whatever aid or assistance may be needed to extinguish any fires which may be found in the forests of the state; and in those places which are

not incorporated, the fire wardens are to be appointed by the county commissioners to perform similar services. With the exception of the single provision giving authority to the board of forest commissioners to take lands in a certain contingency, this statement which I have read to you contains all the authority which is vested in the board of forestry commissioners. You will see that it is simply one of inquiry and investigation and examination, and education, if I might use the word. The only subject of which the legislature has treated by positive enactment bearing upon the question, is the one relating to the extinguishment of forest fires through the agency of the selectmen of the various towns of this state. This, however, is a step of great importance, and of immediate interest.

The forests of this state, and the forests of all the states in this Union, have suffered, and are suffering, perhaps more from the effects of forest fires than from any other one agency that is at work to-day. Of course great havoc and destruction is caused by the felling of a large number of forest trees in the way it is done, and upon so large a scale, yet the forest fires which follow in the wake of this devastation perfect the ruin and make the devastation absolute. Recovery from the effects of fires is always difficult and sometimes impossible. Where the forest has been denuded of its trees and the soil has become dry, and the mattings of roots underneath that soil have become food for the flames, there the work of the fire is a work of destruction, which sometimes absolutely destroys the capacity of the soil for reproduction. And that is especially true on the highest land and on the slopes of the mountains, where the effects of the falling rains and snows complete the work which the fire itself had begun. Now I invite the attention of every intelligent man in my hearing to the absolute importance of this one question, and if there is no other subject for the legislature to interest itself in for some years to come, I ask that the law relating to the provision for the extinguishment of forest fires be made more complete and more efficient than it now is, or can be under the present law. By doing that, if nothing else shall be done, the probability of the great loss which the country is looking upon now with serious apprehension will be, at least, longer delayed, if it is not finally prevented.

Mr. President, correctly speaking there is no forestry in this country. It is not only true that we have no system of forestry in this state, but it is equally true that we have none in the country at large. Our national government has, with a wise liberality, made some fifteen reservations within the limits of the country, averaging, perhaps, somewhere in the neighborhood of a million acres each—some fifteen millions in all—which are to be preserved as public parks forever. This, as a great object lesson, will be certainly interesting; but the little state of New Hampshire, with its narrowed area, can hardly hope to imitate or follow far the course that may be taken by the national government in the improvement and preservation of its parks.

Speaking of the want of a system of forestry, we are obliged to learn things of a practical character, relating to forestry, from the old countries. There it has been studied as a science, and it has been practised as an art for hundreds and hundreds of years. The care of trees, the goodly growth of trees, the cutting, hauling, transporting, and disposal of the lumber from the trees, the preservation and the integrity of the great forests of all the states on the continent of Europe, have been brought nearly to perfection.

Let me glance a minute at a few statistics which will call your attention to the magnitude and the importance of this great subject, and the view entertained of it by the oldest and most experienced nations of the world.

The little peninsula of Italy, a country about half as large as the single state of Texas, has ten millions of acres of forests. As long ago as 1826, every one of the Italian states had elaborate forest laws, carefully considered and vigilantly enforced, looking to the preservation of that great industry and interest. Since the consolidation of the states under the present government, a general forest law has been passed, and all the movements looking toward the cutting of these forest trees are regulated by a government commission. Let me say here, in passing, that a very important lesson is taught by the experience of Italy, for it is said that in one of these countries the cutting down of these forests a century and a half ago created, in one section, climatic changes of a highly important character,

effecting the growth of certain crops which could no longer be raised. That it was owing to the cutting of this forest, and the consequent change of climate, is proved by the fact that, after a certain time, the district was reclothed with a heavy growth of forest wood, and the same crops that had been made impossible to grow, in the mean time were raised again, precisely as before the first cutting of the forests had taken place.

France, on account of the subdivision of her territory into so many small farms, suffered severely, years and years ago, from the cutting off of her forest land. But seventy years ago, France took upon herself the labor of the restoration of this great product, and two hundred and fifty thousand acres, that had been completely sterilized, as was supposed, by the action of former generations, have been restored to a forest growth, and they now have a stringent law to protect this growth.

Germany has thirteen millions of acres of forest, and one third of that thirteen millions is owned by the government, and all work relating to the cutting of the forest is under the supervision of a vigilant police. The same is true of Switzerland, and even Sweden, and the same is true of Austria. In Austria, this great subject has received perhaps more study and attention than in any other country on the face of the earth. Austria has had a system of legislation for more than three hundred years, looking to the preservation of the growth and improvement of her great forests. She has thirty-two thousand men engaged as foresters, throughout the entire empire, a number exceeding our entire standing army. Austria has schools, graded schools, in which forestry is taught as a science. She has a great university in Vienna, where they graduate after a course of hard study extending over six years and a half on this one great topic.

I see before me, to-day, the distinguished president of the agricultural college of this state, and I sincerely commend to him this great subject, and the propriety of introducing some of the studies relating to it into the curriculum of his school.

When one comes to this country from the old, with its system of forestry and the economical use of the forest product, what do they see? They see this,—that having come into possession of the greatest treasure that ever fell to any people, we

have made the most reckless use of it that history has ever recorded. And that is not true of New Hampshire especially, and perhaps it is not emphatically true of New Hampshire at all. But it is true of the country at large. For instance, in 1885, it was officially reported that California had cut off half of all her forest wood; Minnesota, a comparatively new state, having but a few years ago nine millions of acres of the finest forests in the world, had only four million acres at that time; Wisconsin has suffered equally with Minnesota in the diminution of her forests; and Michigan, the great northern peninsula, running up between those great lakes, presented an unbroken forest representing millions of wealth. Some one has said, speaking officially of the present condition, that the end of the forest interest in Michigan is in view. Take the great state of Ohio, from where my distinguished friend [Mr. Brigham.] on my right comes. Ohio, in 1850, is represented to have had fifty-three per cent. of her whole area covered by forests, which was reduced in thirty years from that to seventeen per cent. Indiana, in the same time, was reduced to nineteen per cent., and the great state of New York paid but little interest to the forestry question herself, until it was observed that such encroachments were being made upon the Adirondack region that the waters of the Hudson were being visibly affected, the supply running short during the whole of the warm season, and the floods of the spring being more disastrous than ever before; but now she is giving what attention she can, at this late day, to the preservation of that magnificent region; but yet great devastation has been done in stripping the forests from some sections of that great country. More than fifty thousand acres, that a few years ago was covered with a luxuriant growth of forest trees, is ruined forever. The forests have been ruined forever, the soil itself has been carried away by the action of the frosts and rains, and the ground rendered incapable of bearing forest growth.

In a word, let me state one more fact which is of alarming interest to every man who has the welfare of his country at heart. It is authoritatively stated that we are to-day cutting in this country twice as much lumber as is grown from year to year.

But I was requested to speak on New Hampshire forests. I have made these general statements in order that you might comprehend more clearly this subject, as bearing upon our own state, and the course of conduct necessary in order to save what we have left.

New Hampshire possesses, substantially, three millions of acres of forests,—more than fifty per cent. of her entire area is covered by forests. A great part of this is in the north region. It is in the White mountain country, and the extreme north of the state. These forests are simply invaluable to the state of New Hampshire, as you will see from a very few considerations. Their value cannot be estimated in dollars and cents. They transcend every other single value in this state, and I say it, however startling this may be to the gentlemen assembled, who are interested especially in agriculture itself. This department of agriculture, the forest department of agriculture, transcends in value the interest of the strictly agricultural department. Why? That is very briefly stated. In the first place, the forests of this state are the source of all the rivers of the state. They not only, by the retention and absorption of the water that falls from the clouds in rain or snow, regulate the movement of our rivers, and of our springs and streams, but they form the sources of those streams and springs and rivers. If the forests of the great north of the state were to-morrow swept from the mountains, where they now grow, our rivers would cease to be of any value, of any commercial, manufacturing, or mechanical value,—they would be merely for a time, sluiceways to carry off the floods occasioned by the rain that would immediately flow from the hillsides and the mountains, and there would not be one continuous stream of water in the whole state. The springs themselves would dry up. They are fed from the water that is held in reserve in the forests. The forests are, therefore, necessary and indispensable to the integrity of the state itself. The miles of the streams that are now used to move the wheels that enable this state to be dotted with the manufacturing establishments that bring so much wealth into the state, would fail to do their work. I do n't say, gentlemen,—I am not prepared to say,—that we are at the threshold of this great catas-

trophe. I do not assert here that we are in any immediate danger of any sensible diminution of the water-supply. I know that is, at present, in New Hampshire, a disputed point. I know there are men of great judgment, who think on the one side, and many men who think on the opposite side, of this question. I do not think we can tell in regard to the Merrimack so well, so long as they have their great reservoir which holds the water in Lake Winnipiseogee, and distributes it somewhat equally from there throughout the state. But I do not believe that system is to be depended upon. It cannot be depended upon. It would practically cease to be a system if the forests were materially interfered with.

Then the streams themselves would be practically useless. We cannot have our water-power saved forever, by merely having the streams eternally dammed. That is a physical as well as an illogical contradiction. It is utterly impossible. Well, then, there are other considerations bearing upon the necessity of preserving the forests. The forests are our timber-supply. What does this mean? Why, gentlemen and fellow-citizens, it means this: It means that when our timber-supply, no matter by what means, becomes materially lessened, every man in this state, and in the country, so far as that goes, will feel its effect. If building materials are made difficult of attainment, if the supply shall not equal the demand, —the increasing demand, as we increase in population—what is the effect? Poorer buildings, to start with; smaller buildings, smaller sheds, smaller houses, poorer quarters for the ordinary man, more infrequent repairs, poorer conditions; and the necessity which will compel economy in that direction, will compel economy in every department of life, and our people will be poorer in every respect. They will be housed more poorly, they must dress more poorly, and must fare more poorly, they will have less amusement in their homes, and less attractive homes. It means that we shall cease to be the proud, independent people that we are, and in fact, civilization itself depends upon the preservation of the forests and the timber-supply. Under these circumstances, what should we do? Instead of contenting ourselves with the present supply of timber, we should see to it that we have an increased supply.

[At this point the governor appears and is greeted by a selection from the band and cheers.]

It is a very agreeable circumstance that I should be interrupted in my remarks by the approach of my esteemed friend and our highest officer of the state, the honorable governor of the state of New Hampshire.

I was saying, fellow-citizens, that we shall, not only in this state, but throughout this country,—as our population becomes more dense, and our wants increase,—we shall need not only our present supply of forest growth, but that supply must be increased and never diminished.

But how is this to be brought about? I will speak only a few minutes upon that subject, as my time has nearly expired. You know how limited is the power of the legislature over the conduct and management of private owners and their property. The state of New Hampshire, I am sorry to say, does not own an acre of forest land. What, then, can we do? The most that can be done is to regulate—can we regulate the cutting of the forest growth? Well, fellow-citizens, not much can be done by direct legislation, but more can be done by the education of public sense to a higher appreciation of the importance of this great subject, and to educate them up to the best methods of conducting this great business.

What can be done in that direction? We must turn, if we would have correct methods, to the practice of those countries, which, for hundreds of years, have most successfully maintained their forest conditions and grown rich in the doing of it. And how have they accomplished it? It has been simply by letting the forest growth be regarded as any other growth that nature gives. Let the forest growth be treated as any other growth that nature furnishes us. Let the ripe trees of the forest fall before the woodman's ax and no others. In that way, we will not only be maintaining the forest conditions as they are, but we will be improving upon the present conditions. It is not an injury, but it is a positive benefit and advantage, to cut out the ripe trees from a forest. It leaves the other trees to grow and mature. It leaves to the owner, who will wisely and judiciously establish this practice, his entire capital invested in forests forever, and a perpetual

income from that forest; it leaves to him the possibility of not only saving, like a prudent and sensible man, all his own property, but of transmitting it to his heirs and to generations that are to come after him. This is found upon experience to be the only true method of dealing with the forest question, with the view of the highest interests of the owner, and the welfare and safety of the state.

Well, fellow-citizens, there is one other subject that I must call your attention to for a moment, with reference to our own forests, and I believe I echo the sentiment of every man present when I say that this method must be adopted, which simply means, in New Hampshire, that the forests must be preserved. The forests must not be sacrificed, as they are not only needed for the purposes I have named, for the regulating of the water-supply and the wealth which they indirectly bestow in that way; they are not only needed for the timber-supply, which is simply indispensable for the maintenance of our integrity as a state and of our civilization, but they are needed for the financial as well as the social value of the scenery which they help to constitute among our hills. There is a financial value to New Hampshire scenery which has just begun to be appreciated, and it is not yet half appreciated. New Hampshire has her mountains, which attract and will attract millions of people to the Granite state who wish to spend their summers or a portion of their summers here. There is no land that is so attractive within more than a thousand miles. It is the centre of a population of ten millions of people, and it should be made attractive as a summer home for the millions of people who are ready to come here if that scenery is preserved from the devastating ax or the still more devastating fire.

We owe it, moreover, as a duty to posterity, that this great heritage of ours should not be impaired, because, fellow-citizens, we have not the moral right; it is not consistent with patriotism; it is not consistent with what we owe to our state, to its institutions, to its history, to its future; it is not consistent with any of the duties which we owe as citizens, that we should for a moment tamper with a possession of so priceless a nature and of so much value to future generations, a possession which they must have in order to be as happy as we are. We owe it to

future generations who shall come after us to transmit to them without impairment this important heritage which has come to us from our forefathers. Therefore, it is a duty in every aspect of the case to preserve our forests.

We shall deserve and receive the opprobrium of history if we do not use our best endeavors to investigate this subject in all its bearings, and after all the facts have been fully ascertained, I trust that it will then be possible for some future legislature to pass a system of laws so that the cutting will be limited in such a manner that all injury shall be avoided to the state, while no injustice is done to any private owner of the forest.

My time has expired, and I must leave this interesting and important subject at this point. I thank you all for your kind attention.

THE PRESIDENT: This meeting now stands adjourned until 2 o'clock.

AFTERNOON SESSION.

THE PRESIDENT: We have with us this afternoon a gentleman that you will all be pleased to hear speak, a gentleman that came up from the ranks, came up all the way through life as I like to see a boy come up; and he has made a great success in life, on account of his habits of industry and the close application of his powers to his business.

I now have the pleasure of introducing to you the governor of the state, Hon. John B. Smith.

ADDRESS OF GOVERNOR SMITH.

We are thankful for the excellent crop prospects in New Hampshire. Seed time and harvest have not failed. The hay crop, already largely secured, is both abundant and excellent, and all other crops, in their present appearance, give promise of a good yield. Our flocks and herds have been spared from disease. The vigilant and ever prompt action of the board of cattle commissioners has prevented the spread of that scourge of the farmer, tuberculosis, and it is gratifying to know it is being gradually stamped out of the state. The dairy interest, which is fast becoming the chief and best feature of the farm, is

making steady growth and progress. In the butter exhibits at the World's fair, New Hampshire has forged ahead of all competitors, and of this we have reason to be proud.

Bread used to be spoken of as the staff of life, but now when men speak of the chief source of nourishment of "the life that now is," they are apt to call it their "bread and butter." The butter is quite as important as the bread and costs quite as much.

Of course the misfortunes of the banker and manufacturer are shared by the farmer, either directly or by sympathy, and his ease and feeling of security are comparative only. He is simply better off, or not so badly off, as they; and it may be proper to say here, and it is especially true in New Hampshire, that the farmer's prosperity is inseparably associated with that of the manufacturer. Any species of legislation or any policy of government that strikes down the manufacturer hits the farmer also. Except for the growth of our manufacturing cities and villages, New Hampshire would have made a sorry exhibit the last decade.

Not far from where we are to-day, stand the beautiful and commodious new buildings of the College of Agriculture and Mechanic Arts, soon to be formally dedicated and set apart for the purpose intended, and to which a new president has been chosen, one who is worthy of our best regards and highest hopes. This most happy and desirable result is the work of the farmers of the state; it is for the recognition of their interests, and ought and will be a great advantage to them.

Now, in view of all these things, it is fair to say—notwithstanding the stringency of the money market and troubled condition of the business world, notwithstanding men's hearts are failing them for fear,—it is fair to say the farmer is to be congratulated, and this can hardly be said of any other class or calling to-day. Let the young men of the state learn a lesson from the times; learn to have more respect for this old business of tilling the soil, which is, after all, proving itself the safest and best in the long run. Let them not think, either, that the successful farmers must go West. Farming in New Hampshire, if properly conducted, with the same application of skill, intelligence, enterprise, and thrift, will pay, I believe,

as well in New Hampshire as in Dakota, with the added consideration of the superior advantages of the East, with respect to educational facilities and climate.

THE PRESIDENT: We have with us to-day the distinguished president of the New Hampshire Agricultural College. He is new to you, a stranger in one sense of the word, but we hope that he will become more familiar to you in the future, especially if you want to send your sons and daughters to the agricultural college. Both sexes will have a chance there to get a good education, and we think we have a president at the head of it who is a man fitted for the place.

I now have the pleasure of introducing to you the Rev. Charles S. Murkland, who will speak to you on the subject of agricultural education.

AGRICULTURAL EDUCATION.

BY REV. CHARLES S. MURKLAND, PRESIDENT OF THE NEW HAMPSHIRE COLLEGE OF AGRICULTURE AND THE MECHANIC ARTS.

Mr. President, Your Excellency, and Ladies and Gentlemen:

It is with a great deal of pleasure, although with reluctance, that I come before you to speak upon this question. I, whose history and associates have not been those of a farmer during the most of my life, and who know so little about the things about which you know so much, to come here to a gathering of farmers in this part of New Hampshire, or in fact of the whole state, to speak upon so large a theme as that of agricultural education. The reluctance is not diminished when I am introduced as a distinguished president, not being at all distinguished; and when such a phrase as that is used as applied to me it would seem to be used in irony, if I did not know the genial heart of the president of the State Board of Agriculture.

How strange it is that there has crept into our minds the feeling that in some way agriculture and education must be antagonistic. It is utterly false and misleading. It is impossible to compute the debt which education owes to agriculture. In the first place, there is no fact of the history of our own land

more characteristic or more striking than that which presents the Pilgrim Fathers and their successors for many generations tilling the soil with diligent care, with never a thought that their occupation was any less honorable than any other, and then gladly giving of their increase that their sons and daughters might gain the highest education. That was the beginning of American life. Agriculture and education walked hand in hand. And if, some sixty years or so after the landing at Plymouth, it was a minister who gave his name to the first college of this country, it was the farmer who maintained the school and sent his sons there to be educated, and helped make it the institution that it is to-day. Is not that true? No one then supposed that the time could ever come when the friends of agriculture would look askance at the friends of education, or that the men of culture in this land should ever affect to turn with scorn upon a member of that profession upon which their livelihood depends. But this debt of education to agriculture is always in process of payment. Have you not noticed the process of nature by which all such debts, when they are in the progress of accounting, are tending towards a progressive balance?

I listened, as you all did, with the utmost interest and the greatest pleasure to the addresses we heard this morning, and was delighted to see, running through both of them, an illustration of that truth which is coming to be more and more the common understanding, that every branch of human industry must become more and more indebted to study and investigation. The gentleman who spoke from such infinite resources concerning fruit culture—do you not recollect his allusions to the soil as affecting the color, texture, and flavor of the fruit? How comes it that man knows these matters? Look at the chemist watching patiently, with the utmost scrutiny, to see the process and results of his analysis, in order that he may tell the men upon the farm what are the constituents of the land, what the constituents of the crops, and how to produce them. Did you not also hear the eloquent member of the forestry commission speaking upon the question of forests and the relation of timber lands to the rain-fall, and thus indirectly the relation of timber lands to agriculture? Did you not hear him

say that we are at the very beginning of the understanding of the principles which are involved? What does that mean? It means that we have before us a large field for study and investigation, where men, by diligent research, shall find out day by day the truths of the great gifts of the universe, so that every man may make the laws of God serve in his proper calling.

But, Mr. President, time is passing rapidly, and I have not yet said anything about the thing which I suppose I am expected to represent, the New Hampshire College of Agriculture and Mechanic Arts.

A favored work opens before that institution. I can understand how those of you who live upon the farms feel that you can teach your boys practical agriculture. You do not care to send them to the agricultural college to teach them to hold the plow. Of course you do n't. There are certainly some things that you can teach them better and more economically; but there are things which they must still be taught, which they can learn only in the laboratory by practical experiments, and in many of the countless ways by which it is possible to gain a broader information; and as to those things, there is a place for a course of agricultural teaching. It is necessary to teach the boys how the crops grow, to teach organic chemistry.

I claim in behalf of this institution that its hope, and almost its promise, is to check in some measure the exodus from the country to the city. We cannot stop it. There are causes at work so fast we cannot touch upon them here, and they will work for many days. A hundred years have passed, and still it remains. Many years, yea, some generations, will pass away before we can change these things. These causes are found partly in the aggregariousness of men, partly in the enticing opportunities of city life, partly, is it not, in the surroundings which, all unintentional, the boys have had around them on the farm, so that they have sought with eagerness any work that will take them from that life.

We cannot at once and altogether stop this exodus from the farm into the shops and stores, but we can check it a little. If you will send us your boys untainted with a dislike for the farm—that is the first condition; if they come with the simple purpose to do that work for which they are best fitted, to use

the faculties God has given them, then we are in a position to make them see the grand possibilities that are before them in the use of those faculties, and teach them that they can by so using them make themselves a power among, and a peer of, the wisest and best in other callings. We shall always keep in the atmosphere of that institution the feeling that a man is to be honored and respected for his quality and esteemed for his worth, and not on account of the incident of his birth or occupation.

There are other departments not less important than that of agriculture. I wonder how many of you who have four or five children would have them all go back to the farm if you could! I think, none of you. You would seek out for them various occupations, and thus extend the range of your own life, by making one a farmer, another a mechanic, another a doctor, and another a minister of the gospel, etc. This college will take your boys and girls, and if they have a mechanical bend, or desire to learn a trade of one kind or another, we will take them, and carry the teaching through to the farthest limit. If we have any scientific timber, we can take them and teach them by the best methods known to-day—chemistry, botany, zoölogy, and all the rest, and teach them so that they shall be equipped, wherever they are, for their life's work.

Gentlemen, in behalf of that college, I have to tender the most sincere thanks to the board of agriculture, and to the farmers which it represents, for the interest you have taken. Without your interest, it would not stand where it does to-day, and in a large sense, the future of that institution is in your hands. It wants your confidence; it wants you to believe what you would believe if you were studying one year in the school at Durham, that the work is going on in the most broad and progressive spirit. Those that are in control of that institution are determined, as far as they can, to have the New Hampshire College of Agriculture and Mechanic Arts rank with the best of the technical schools in the country. To that end we want your confidence, we want your children, and we shall want a little patience on your part, knowing that time goes so swiftly to those who are trying to accomplish anything, and the years go by unnoticed.

In another year perhaps a more definite report can be given of the progress in the neighboring town. The work is going on. It shall be a good work, and the work demanded by the boys and girls of our state.

THE PRESIDENT: We have with us to-day a distinguished speaker, that has spoken in this state and also in Connecticut and other places, upon agriculture. It is the gentleman from Ohio, worthy master of the National Grange, and I now have the pleasure of introducing the Hon. J. H. Brigham, of Ohio.

THE FARMERS' RIGHTS AND DUTIES.

BY HON. J. H. BRIGHAM, OF DELTA, OHIO.

Mr. President, Ladies and Gentlemen, and Fellow-Citizens of the Old Granite State: I feel under just a little embarrassment in following these distinguished gentlemen. I am myself a western farmer. I was born in Ohio, and in my early youth moved into the wilderness in north-western Ohio, and so did not enjoy the educational advantages that these men who are reared in New England, and the young of Ohio, enjoy to-day. If, therefore, you expect a literary discussion from me, or a scientific lecture, you will be disappointed.

The subject upon which I shall talk to-day is, The Farmers' Rights and Duties, a subject selected by the Secretary of the State Board of Agriculture. It is not the subject I have been discussing for several days, and I do not know how well I can get hold of it on this occasion. In presenting this subject I shall do it in a broad and liberal spirit, because I am not one of those farmers who believe it wise or best or right to try to array the farmers against any other class of people in our country. I would rather labor to harmonize all the relations that exist between the various industries, and teach the farmers to coöperate with every man that is doing a good work for himself and for his country. But I believe it is a wise provision that the different callings and interests be represented by men who are directly connected therewith, and hence I make no apology for attempting to discuss this question.

The men who landed on Plymouth Rock came to till the soil. They were farmers; they cleared away the forests, drained the swamps, and transformed the wilderness into the grand home of civilization that it is to-day. In all these years the farmers have been the pioneers, who have gone before and have prepared the way for every other man and the other industries of our country, and endured the hardships and deprivations incident to pioneer life. So I claim for the farmer that he has performed his full share in laying the foundation for this government of ours.

When the time came that it seemed wise to separate or sever our connections with the mother country and establish a new form of government, it was the farmers largely that brought about this change. It was the farmers of Lexington, you know, that fired the shot that rang around the world, and during that whole period of suffering and death, the bravest of the brave were the men who came from the farm homes of our country. They fought the battles, taking victory or defeat, whichever might come, but never laying down their arms until victory crowned their efforts.

When peace succeeded war, the men who assembled to frame the constitution and make the laws that were to govern this new republic came largely from the farms. No man questions their ability or their fitness to do this work well. They laid the foundations broad and deep, and those foundations stand securely to-day.

As strong in peace as in war, those men went out into the fields of our country and by their industry and their skill they raised this country from a condition of weakness and poverty to one of power and wealth. We became the wonder and the admiration of the world because of the grand results worked out largely by the farmers of our country. In this they did their full share.

When our institutions were put to the severest test, when brother went to war with brother in that great struggle in which some who are here to-day participated, the men who were of the truest and bravest among those men who followed their country's flag, were the boys who came from the farm

homes of our country. No one questions that they fought on, never faltering an instant, until the national life was saved.

When the war was ended, they realized that a large debt had been piled up to maintain the war, and that the credit of the nation had been strained. They laid aside their implements of warfare and went again to the fields, and by their diligence and their skill, they have very largely reduced that indebtedness, and have restored the credit of the nation, until it is second to no nation in the world. Except for this, our country would not be where it is to-day and has been for years.

I do not pay any attention to the little flurry that is now rising in regard to financial affairs. We are going to settle that matter as we have settled other matters in the past. We are to-day, notwithstanding the trouble that presents itself, a prosperous, wealthy, and happy people, and ought to be.

Now then, it seems to me, that after this statement of facts no one will attempt to deny that it must be clear to all that the farmers have performed their full share of the work of opening up this country, making its laws in its early history, and fighting its battles. They also have been accredited with bearing a full share, and a little more, of the public burdens. Others may escape some portion of the burden of taxation that belongs to them, but for a farmer there is no escape.

It seems to me, that, in view of all these things, we can consistently ask for the farmer a full and fair reward for his toil,—can claim for him an honest share of what the harvest yields. It seems to me that the farmer, who loves his wife and children as dearly as any other man in any other class or condition, should have for those who share his toil an honest and liberal reward. He should not only be liberally and fairly rewarded in a financial way, but having been as patriotic as any and having endured as much as any of her people to make this republic what it is to-day, it seems not inconsistent to ask that he, too, shall share in the honors that are to be distributed among her people. We cannot afford to let it be understood that the young man who selects agriculture for his calling and his profession is to be deprived of those positions of honor and trust which we daily confer upon our citizens and as to which we claim for the farmer a full and equal recognition. I believe that the farmer

of to-day should share as fully as did the farmers in the early history of the country in framing the laws that are to govern the people.

I am not complaining of anybody, understand, but the farmers. I think we are making a mistake to-day, when we allow this great interest of ours to be so meagrely represented in the law-making bodies of the state and nation.

Reference has been made to congress, that has just assembled to consult together to try to provide remedies for the disaster and for conditions that seem to be inevitable. These men have to deal with vital interests, in which no one is more interested than the farmers of our country. Should not that body be composed of men who are familiar with all the industries of our country? Should it not be composed of men who feel the wants, needs, and demands of every industry, in order to deal intelligently with the questions to be considered there? That seems to me right. But how is that body constituted? How are we represented? This great interest of our country—and I don't underestimate the other great interests—has twenty-seven men in that assembly to represent it, counting all the men who come from the farms and stock-ranches of our country. On the other hand there are of the legal profession—grand men, many of them—just two hundred and forty-five. Now I am not making any arraignment of the legal profession. They have their places there, they have their work to do; but I can tell you, that in view of the substantial part that the farmers have played in this country, and in view of the large agricultural interests that are at stake, we want enough members in congress to at least constitute a committee of agriculture, that has to deal with the agricultural interests. And yet many times, there are not enough farmers assembled there, to constitute an agricultural committee. I remember one gentleman that went from New York state, who himself said that he knew nothing about agriculture except what he could see on his way from New York to Washington.

It seems to me that considering these conditions and considering the fact that we are not satisfied with the results we see around us, we ought to consider very carefully this question of whether we have a fair and honest share of the repre-

sentation in the national congress. We do not expect to turn out all of our legal friends, of course. They are going to be there always, and in considerable numbers. Some of them are the very best friends of agriculture. We do n't expect, I say, to monopolize all the legislative power.

I remember talking on this question in Ohio recently, and my friend, John Jones, who has been to congress, seemed to get the impression that we farmers proposed to take possession of the law-making bodies of the country and run the legislature to suit ourselves. I assured him that we did not expect anything of the kind. But at present congress seems to be in the same position as to lawyers, that a certain bad place is supposed to be,—has plenty of them. I will tell a story that Brother Hale sometimes tells. He speaks of an Irishman that had a dream one night, and he dreamed he died and had some doubts about being permitted to pass the shining gates, but he went to heaven, very much to his surprise. There he found himself in his dream, and was very glad to be there, although he doubted his rights. Finally he found some one that questioned those rights, and they said to him: "What are you doing here? You have n't any business here. You are not entitled to occupy any of this territory," and they insisted that he must go out. Pat was a good deal disturbed about it, but wanted all the privileges of defending himself that would be granted, so he said: "I should have the right to a lawyer to defend me, and plead my cause, and now you must give me time to secure the services of one." They admitted that right, of course. After some time he was asked how he got along in his search. He said: "It is all right. I have searched all over heaven and ca n't find a single lawyer, so I am here yet."

A Voice. They were all down here taking care of the wicked farmers.

Mr. Brigham. Yes, that is it. Congress is not going to become a place where none of our legal friends can be found. It seems to me that all are ready to admit the justice of the claim that the farmers should have an equal and fair share in the profits of his own labor, with an equal and fair representation; that the burden of taxation which he bears, and which belongs elsewhere, he should use the power to remove and

place where it belongs. I do not say that it is on account of the excessive honesty of the farmer that he pays more than he should. I know that the farmer has become used to being called a plain, honest, class of people. I have travelled for some time in New Hampshire and other portions of New England, and I have not found out that we are particularly plain. We are not particularly plain. We are rather proud of our good looks, as a class. Neither do I suppose we are particularly honest.

There is another point I wish to make. I do not know what I may find, but I have n't yet found that locality where there is any large amount of surplus honesty among the farmers. So I claim nothing on that score. It is because we have a large amount of property that is easily found and easily valued. It seems to me just and fair that all the property, where that is the basis of taxation, should pay its equal and fair proportion and not place upon the farmers more than their fair share.

We must not only have our share of the good things, but we must be ready to do our share of all the work that is necessary to build up and develop this country and make it what the Almighty must have intended it to be. We must not shirk our responsibilities in our country. Every man of sound mind, who has reached the years of manhood, is not only a citizen but a sovereign, and he is responsible largely for the conditions which exist in this country today. The farmers must share fully in this responsibility. And when I hear them complaining, as they do sometimes complain, and without just reasons for their complaints, I think they are only drawing an indictment against themselves; because, if grievances exist, if the government is not what it ought to be, if the farmers are discriminated against by those who make the laws, it is the fault of the farmers. The responsibility rests with them. We must do our full share in governing and controlling this country, and in order that we may do this, we must do everything within our power to promote the education of the farmers—education along many different lines. I listened with great interest to the remarks of the man who has taken charge of your agricultural college. I do not think he went quite far enough in the work that he has outlined. I believe that the sciences and questions

that pertain to agriculture and mechanical arts should be taught; but they expect, in all of these colleges, to teach the mechanic how to work with his hands, just how to handle his tools, and I think the farmer boy that goes to your agricultural college should not only learn the sciences and acquire a knowledge that will help him in that way, but he should have practical lessons from the most skilled teacher on practical farming that can be found in this country.

I have been a farmer boy all my life, and I know something about what a farmer does n't know, and also what they ought to know, and when they go to college what they ought to learn. There is a good deal in knowing how to hitch a team to the plow and how to plow. I have hired a great many farmers' boys on my farm to work for me, and not one half of those boys knew anything about plowing. Talk about plowing: It is a scientific occupation. They should have in this agricultural college, and in that of every state in the Union, not only the theoretical, but the practical instruction that will make them successful farmers when they go to work for themselves. Theory is good, but it does not go far enough. So I hope that the president and faculty will give this matter due consideration. I have been for some time connected, but am not now, because my politics are not right, with the agricultural college in Ohio, and we are progressing along that line. We have a grand institution there, where the very best instruction is given in the sciences, etc., and where there are fine opportunities for learning how to use tools, and all of that. That institution is training every nerve to develop the practical teaching, so that when those boys go out to the farm they shall feel perfectly self-reliant, and able, not only to solve the problems that may come before them, but to do the very best of work. We need such work on the farms as well as anywhere else, and more; because there is at present more slipshod and indifferent work done there. We need better work on the farm than in any other business in this country, I believe.

But this is a little digression that I did not intend to make.

Now we farmers must realize that we have great responsibilities thrust upon us as American citizens,—responsibilities we must share with our fellow-citizens of other conditions and

classes. There are great questions to be solved; there are great dangers now threatening our country.

One of them is the piling up of immense fortunes to be controlled by one family or one individual. There is danger there. A man to-day with a million would not be a dangerous citizen. But what could not a man with a hundred millions at his command do, if he was disposed to use the power that it gives, to the disadvantage of the people? I do not speak against capital. We have got to have it. But I believe the time has come when the people must give this matter consideration, and provide against the dangers that may come from these vast fortunes carried along by one family and controlled by individuals, year after year.

There is another danger, too. We find concentrating in the great cities of our country the vicious, the dangerous classes. They are there in sufficient numbers to almost control these great cities, and in the hands of demagogues and scheming men they become a dangerous power that must be held in check, and citizens who love their country, its freedom, and its laws must meet this danger. The farmers must do their full share. We cannot afford to shirk. We must come to this work earnestly, seriously, and practically, and do our whole duty. If we do that, I believe that whatever troublous times we may have, the dangers will all pass away.

Now then, with these suggestions, I shall ask how the farmers may hope to succeed,—how they may hope to secure a fair share of the profits of their labor, and perform a fair share of the work in governing and controlling this country. How can they do this? I can see but one way, and that is to make your power available by thorough and systematic organization. I believe in organization. I am not criticizing any of the great combinations or associations that have become so powerful in this country to-day. They have sometimes done that which is wrong, possibly; they have sometimes proved oppressive, possibly; but yet they have worked a revolution in the affairs of this country, and have wonderfully developed the resources of the country.

It seems to me that, considering all our wants and needs, there is an absolute necessity of doing all we possibly can,

individually and collectively, to work out better conditions even, than those we have to-day. We can do this. If the farmer has not a fair share of the profits of his labor, he can secure it, if he will make his power available by fair and legitimate means without interfering with other legitimate industries that exist around us. He can fit and prepare the boys and girls growing up on his farm, for the great work of self-government, the great work of governing this grandest of countries in the world.

But unless we are willing to coöperate intelligently, systematically, and persistently, I can see no hope for such a result.

Hence, in discussing any question interesting to farmers—and everybody is interested in questions of interest to the farmers—I always improve every opportunity to impress upon their minds the idea of self-help, and of getting together for the purpose of consolidation, and for the purpose of arranging plans and means of coöperating in every good work; because, when we do this, we wonderfully increase our power. Individually we are weak, but collectively we are strong, and it is collectively that we can make our power available, if at all.

In travelling about New England, I realize the truth of what your governor has said, that, whereas those that have thought themselves very wealthy are in deep trouble in the midst of these financial disasters, I find among the farmers, wherever I go, contentment and a reasonable degree of prosperity. I love the West, I love Ohio. I think I could succeed better there in practical agriculture than here, because I know how to farm in Ohio; but I can see that you have a great many advantages here that we have not, and if you will improve all those advantages, the convenient situation of the very best markets in the world, and the many other valuable advantages that you have, you will be able to secure a fair share of the profits of practical agriculture here in New Hampshire and in New England. It will require industry. You cannot loaf around and waste your time and wait for somebody else to do the work, and succeed. It will never do to work on that line. Sometimes men are lazy, and they find fault with the government because they are not more successful. Sometimes men are so lazy that they are willing to let somebody else do all the work and perform all the

service that they ought to perform for themselves,—that is, before they join the grange.

I remember of hearing of a habit that Brother Humphrey got into years ago, before he joined the grange. It was the bad habit of lying in bed in the morning and letting his wife get up and build the fire. The building of fires is not the easiest thing to do here in New Hampshire during your winter season. But our friend at that time did love his rest in the morning, and he hated to get up early—it was so pleasant to lie there in bed. So, as I have said, he got into that habit before he joined the grange. But, one Sunday, his wife thought he ought to get up that morning. She was tired, and was not feeling very well; and so she nudged him to wake up, and said, "Come, get up and build the fire this morning, I have done it all winter." He rolled over and moaned and groaned a little, and stretched himself, and said, "Well, I would like to have another good nap before I get up." His wife was a very kind-hearted woman, and so she let him sleep. After a little while she woke him up again, and asked him if he was not ready to get up and build that fire. He rather insisted upon another nap, and she let him have it. Then she insisted that he should get up and build the fire. Brother Humphrey finally said, "Oh, wife, I suppose I must; but I hope the time will come when I can lie down and have a long, sweet rest." "Well, husband," she said, "that time will come, and you will find that the fire is already kindled, too." That is not strictly according to the brother's theology, but it seems to fit him first-rate, here where the people know him.

I am glad to have the opportunity of talking with you. There are some other things that I intended to say, and I have not said exactly what I told the reporter I would say, and what will appear in the paper to-morrow morning; but I have tried to follow along in the line of that that I thought best suited to set the farmers to thinking.

We farmers have heard a great deal of discouraging talk, and we have done our share of that talk. It is all right to present the facts fairly and squarely to the public, that they may understand them; but I fully believe that the conditions are not quite so bad for the agriculturists in this country as some of

those who speak for the farmers have declared. And I fully believe—and I have given the matter considerable consideration and thought—that in the future, and in the near future, the intelligent, reasoning, thoughtful farmer, who follows his business strictly and intelligently, is not going to regret the fact that he decided this should be his calling, and his life-work.

While I know that many ambitious boys and girls and strong men and women must go to the towns and cities—if they did n't do it, the Lord knows what would become of the cities—the time is coming, and is near at hand, when the ambitious farmer's boy or girl, those who desire to be recognized, respected, and honored by their fellows, need not leave the farm because that is denied them. All this educational work that is going on among the farmers is going to tell. We may not note the progress of every hour or every day. But in this work, where there are four or five thousand meetings held every year in the little state of New Hampshire where a number of intelligent, thoughtful farmers may discuss every question that interests them, it is going to tell, and agriculture will become, if it has not always been, one of the most honored and respected callings of our country.

The President: I want to thank Brother Brigham for setting out my case as well as he did. But he did n't tell all of it, for, since becoming a faithful member of the grange, I have always got up to build the fires.

Mr. Hale: *Mr. President, Ladies and Gentlemen:* I was particularly interested in the remarks of your eloquent and magnetic president of the agricultural college, and was glad of the opportunity of hearing him as I am one of the trustees of the agricultural college in my own state. I noted, I might say, with regret, the remarks he made which seemed to indicate that the work of your college was not that of a strictly agricultural college, but also a college of mechanic arts.

I have studied for some years the discussions in congress, beginning way back in 1858, when this matter of making appropriations for agricultural colleges first came up, and I

find that while the term "mechanic arts" was used, it is apparent to everybody who has looked into the matter, both in the house and the senate, that a purely agricultural college was in view, and if that expression "mechanic arts" meant anything, it meant only such mechanical arts as pertain to agriculture.

I think, in separating your college from the college at Hanover, and in establishing a separate agricultural college, it has been in your minds, and in the minds of the people, that you should have a distinctive agricultural college, not for the farmer boys of New Hampshire alone, but for all boys and girls, whether from the farm, or shops, or anywhere, as a place where they might come and be taught practical and scientific agriculture. I hope that will be the line of work at this school. Teach them botany, and demonstrate the theories of that study by field work, and thus give them an idea of the practical side of it, and so on in every branch of your agricultural studies.

I trust that every professorship there will be in the hands of practical men, who understand not only the scientific side of the work, but who can take the boys into the field and teach them there as well. Then, and not till then, will your college fill its true place.

We have an abundance of scientific colleges and classical colleges and special colleges of all lines, and we want our agricultural colleges to be practical schools of agriculture. It is because you want this that you have separated your institution from the classical school here in New Hampshire, as we have in Connecticut. I trust that you will make a success of it, and I believe you will.

ANNUAL MEETING.

CONCORD, N. H., Aug. 16, 1893.

The annual meeting of the State Board of Agriculture was held at Concord, Wednesday, Aug. 16, 1893, at 11 o'clock a. m., and adjourned to meet at 7 : 30 p. m., at Boar's Head, Hampton. The members present at the adjourned session were President Humphrey, Messrs. Lyman, Towle, Perry, Mann, Hayes, and Graves. The subjects discussed related to the routine business of the board, and to the winter series of institutes. It was voted to hold the annual winter meeting at Keene, December 26, 27, and 28, and extend an invitation to the Granite State Dairymen's Association to hold its meeting in connection with that of the board. The president and secretary were authorized to arrange the programme and secure the speakers.

No further business appearing, the board adjourned.

N. J. BACHELDER,
Secretary.

SPECIAL MEETINGS.

CONCORD, N. H., Sept. 6, 1893.

A special meeting of the State Board of Agriculture was held at Concord, September 6, there being present President Humphrey, Vice-President Philbrick, Messrs. Lyman, Towle, Perry, Mann, Hayes, Howe, and Graves. There were also present the master of the New Hampshire State Grange, the president of the Granite State Dairymen's Association, and the president of the Grange State Fair Association.

The object of the meeting, as expressed by President Humphrey, was to get the views of the members of the board and the representatives of the agricultural organizations present in regard to the scope and purpose of the agricultural college recently established at Durham. Inasmuch as legislative action resulting in the establishment of this college in its new location had been secured mainly through the influence of the organiza-

tions represented at the meeting, it was considered eminently proper and right to express to the trustees of said institution what was believed to be the views of the members of these organizations, and of the farmers generally throughout the state. After consideration of the subject in its broadest sense, which included the intention of congress in establishing agricultural colleges so far as it could be learned, the object of the bequests of Messrs. Conant and Culver, the wish of Benjamin Thompson in making his bequest for the establishment of an agricultural college or school, the understanding of the New Hampshire legislature in appropriating $135,000 for moving the college and providing buildings, and the expectations of more than thirty thousand farmers of the state, who supposed the agricultural interests of New Hampshire would be benefited by this institution through the education and training of men and women who are to follow the business of farming, it was unanimously voted by the board to forward the following communication to the trustees of the college, the same being endorsed by the representatives of the agricultural organizations present:

To the President and Board of Trustees of the New Hampshire College of Agriculture and the Mechanic Arts:

WHEREAS, The act of congress of 1862 establishing colleges of agriculture and mechanic arts in the several states; the acts of congress in 1887 and 1889 making further appropriations for supporting and enlarging said colleges and experiment stations, have had for the main object the advancement of agriculture in the several states, and

WHEREAS, The New Hampshire legislature has made liberal appropriations at the request of the farmers of the state for establishing and maintaining said institution principally in the interest of agriculture, and

WHEREAS, The bequests of Messrs. Conant and Culver and Benjamin Thompson, endowing such an institution, were made, as specifically stated in said bequests, for the advancement of the agricultural interests of the state of New Hampshire, and

WHEREAS, The farmers of New Hampshire have manifested a deep interest in the acceptance of the Thompson will and

removal of the college from Hanover to Durham, and in securing appropriations for its establishment, chiefly in the interest of agriculture; therefore,

The State Board of Agriculture is of the unanimous opinion that said institution should be chiefly agricultural in its character. The agricultural course of the college should be so carefully arranged, and accorded such interest and influence as will make it the most popular course of the college.

We assert that this course should be intensely practical, and educate towards rather than away from the farm. There is no authority for using funds appropriated or bequeathed for agriculture in establishing a classical school. The chief object of this institution should be to graduate youth thoroughly educated in the sciences and arts of agriculture. The girls should be thoroughly instructed in the arts and sciences of domestic economy, and all should receive a good English education. We believe this to have been the intention of every person, so far as New Hampshire is concerned, whose influence was exerted in establishing the College of Agriculture and the Mechanic Arts, and such an institution would receive the support of the people of our state.

The State Board of Agriculture respectfully and earnestly pray the authorities of said college to conform to these views.

The following appointments of institutes were made:

COÖS COUNTY.

Carroll, November 28; Whitefield, November 29.

CARROLL COUNTY.

Jackson, December 5; Freedom, December 6.

SULLIVAN COUNTY.

Sunapee, December 12; Lempster, December 13.

MERRIMACK COUNTY.

Sutton, February 6; South Newbury, February 7.

GRAFTON COUNTY.

Lebanon, February 12; Wentworth, February 13.

BELKNAP COUNTY.

Gilford, February 21; Alton, February 22.

ROCKINGHAM COUNTY.

South Newmarket, February 27; Newington, February 28.

STRAFFORD COUNTY.

Barrington, March 7; Strafford Corner, March 8.

HILLSBOROUGH COUNTY.

Hancock, March 15; New Boston, March 16.

The arrangement of the programme for the institutes was referred to the secretary and member from the county where the institute is to be held.

The board adjourned.

N. J. BACHELDER,
Secretary.

CONCORD, N. H., Oct. 24, 1893.

A special meeting of the State Board of Agriculture was held at Concord, October 24, there being present President Humphrey, Vice-President Philbrick, and Messrs. Lyman, Towle, Mann, Hall, Howe, and Graves.

President Humphrey announced that the object of the meeting was to consider a communication from the trustees of the New Hampshire College of Agriculture and Mechanic Arts in reply to the one sent by the board.

The communication was read, as follows:

DURHAM, N. H., Oct. 12, 1893.

To the State Board of Agriculture, Hon. N. J. Batchelder, Secretary, Concord, N. H.:

Honored Sirs: The board of trustees of the N. H. College of Agriculture and the Mechanic Arts acknowledges the receipt of a communication from your honorable body, embracing several preambles and resolutions, dated at Concord, N. H.,

Sept. 6, 1893, and addressed to the president and trustees of the New Hampshire College of Agriculture and the Mechanic Arts. The communication has been presented to our board, and has received the most careful and respectful consideration.

This board concludes, from the necessity of the case, that the said communication does not represent, and was not intended to represent, the feeling of the men and women who make the profession of agriculture honorable and honored in our state, the actual farmers and their wives and sons and daughters. They have not authorized such a statement. And we have such confidence in their intelligence, and in their integrity, that we cannot suppose them capable of misconstruing the declarations of the president of the college in his inaugural address. Only by utter misconstruction is it possible to see, in those declarations, any menace to or any lack of sympathy with, the agricultural interests so vital to our commonwealth. It is possible, indeed, that the communication from your honorable body, widely published as it has been, may have induced some of our common constituents to feel that the sentiments therein expressed do represent their own feelings. That this impression may be removed, we would say that it is the intention of the president of the college, and the intention of this board, to make this institution subserve the interests of agriculture in every possible way. We are aware, from our necessary familiarity with the case, that this may be done without prejudice to the other interests represented by the heterogeneous population of our state. This college is a college of the people. It must not ignore, nor even slight, any interest which appeals to the sympathies, or to the circumstances, of our people. Least of all can it fail to regard the needs and wants of the agriculturalists, who make up a majority of our population. With this declaration the president of the college is in hearty sympathy. And his influence will be unqualifiedly enlisted in the support of any movement here which may fairly claim to benefit agriculture in any of its branches. In witness to this we may call attention to the "Institute Course," just introduced, which seeks solely to make the benefits of the college available to the farmers of the state, without discrimination. The details of

this course may be found in the forthcoming catalogue of the college.

With the hearty assent of the president of the college we may say that there is no thought of introducing in the near future the study of the classics into the college course. In the words of the president, "If the occasion should arise, we are not debarred from introducing the classic languages;" but, although we have been compelled to face the desire for classical instruction in connection with our technical course, there is no immediate prospect that such enlargement of our actual functions will be made. It is our unanimous conviction that we must respond to the demands of the people; and there is no indication that the people demand of us, just at present, instruction in the classic languages.

We are inclined to make every possible concession, in the hope that the people of the state, most of all, the farmers of the state, may come to a true understanding of their privileges, as those privileges are embodied in this college. If there is one single particular in regard to which this college may be made more beneficial to the agricultural interests of our people, we are ready to adopt, gladly, any pertinent suggestion from your honorable body. We beg leave to transmit to you, therefore, the following resolutions:

"That the preambles and resolutions of the State Board of Agriculture be referred to the Committee on Curriculum, with instructions to confer with said Board of Agriculture, or with a committee thereof, at the college in Durham, in regard to the course of study in the agricultural department of this college; and to make such recommendations as they may think proper, at the next quarterly meeting of the board of trustees."

Respectfully submitted, for the board of trustees:

ALBERT DEMERITT,
Secretary, pro tem.

After discussion, participated in by the members present, the following was adopted:

Resolved, That the State Board of Agriculture reaffirms its former position in regard to the college at Durham, and will

use all honorable means to secure to the farmers of the state a college not only agricultural in name but in reality.

On motion a committee was appointed to make further investigation in regard to the sentiment of the farmers as to how the college can best advance the agricultural interests of the state, and report at a subsequent meeting of the Board.

The president appointed the following committee: Alonzo Towle, Geo. S. Philbrick, N. J. Bachelder.

The Board adjourned.

N. J. BACHELDER,
Secretary.

REPORT

OF

STATE BOARD OF CATTLE COMMISSIONERS.

REPORT

OF THE

STATE BOARD OF CATTLE COMMISSIONERS.

CONCORD, January 1, 1894.

To His Excellency Governor Smith and the Honorable Council:

The State Board of Cattle Commissioners submit the following brief report, for the year ending January 1, 1894:

The statute under which action has been taken, confers upon the Board authority in all cases of contagious diseases among animals, and such attention has been given to cases coming to the attention of the Board as their importance seemed to demand. The legislature, in enacting the law, had in view the suppression of animal tuberculosis among the herds of the state, and to effect this the efforts of the Board have been mainly directed.

The law in force in 1892, providing for the appraisal of condemned animals in a diseased condition, of which amount the state paid four fifths and the town one fifth, was extremely difficult to operate, for the reason that the real value of an animal condemned with tuberculosis was not only difficult to determine, but also, if correctly fixed, would be so small a sum as to be hardly divisible in any proportion between the state and town. The legislature of 1893 enacted a law providing for the appraisal of such cattle upon a basis of health, of which amount the owner received one half from the state treasury. This law was not enacted upon the supposition that there was any such value to an animal condemned with tuberculosis, but rather with the object in view of inducing the owners of such animals to have them destroyed by the state

authorities for the protection of the public, rather than have them transferred to unsuspecting purchasers, and thus more widely spread the germs of disease and death.

This change in the law has had the desired effect, and in addition to this, the better knowledge prevailing among the people in regard to the disease, has stimulated an increased interest in its suppression. The Board has also availed itself of tuberculin in diagnosing obscure cases, the effect of which will be described more fully in this report. These things have enabled the Board to locate and destroy many cases that would otherwise have escaped their notice, and thus remove a corresponding number of sources of infection.

The Board has depended largely upon the advice of the selectmen in the various towns, and requests for investigations have been referred to them when not accompanied by sufficient evidence to indicate the symptoms of tuberculosis. The preliminary examinations made by the selectmen have generally furnished the board with sufficient information to determine whether a thorough investigation should be made. Cases reported by individuals have been given immediate attention, when accompanied by specific information in regard to the character of the suspected case. Under this arrangement many useless and unnecessary investigations have been avoided.

During the year 1893 the herds in 221 stables have been inspected, from which 115 cattle have been condemned and destroyed, located in the following counties:

	Herds Inspected.	*Cattle Destroyed.*
Belknap	5	2
Carroll	1	1
Cheshire	6	5
Coös	2	2
Grafton	10	3
Hillsborough	127	71
Merrimack	43	17
Rockingham	21	12
Strafford	2	2
Sullivan	4	1

A post-mortem examination has been made in every instance, and, without a single exception, it has verified the diagnosis

and revealed the existence of tuberculosis. From January 1 to April 1, 1893, the appraisal was made, so far as it could be, in accordance with the law in force in 1892. From April 1, 1893, to January 1, 1894, the appraisal has been made in accordance wth the law enacted by the last legislature. The state has paid for the 115 cattle killed $1,826.80, or an average of $15.88 each. Attention is called to the fact that 71 of the 115 cases found were located in Hillsborough county, and it is also of interest to know that 24 of those cases were found in one town. Merrimack county furnishes 17 cases, of which eight were found in a single town. Isolated cases are found in various sections of the state, but are generally traceable to some locality, either within or outside the state, where the disease is known to exist. Reference to the counties and towns named is made with no intention of injury, but rather to show that the disease appears to be more localized than is generally supposed, and therefore there is more encouragement in the work of suppression. In 1892 no less than 21 cases were found in the town of Antrim, and in 1893 the board has found but one case in that town. It is only by the most vigorous measures that the headway of this dangerous and insidious disease can be checked, and its complete eradication is impossible.

The subject is receiving increased attention throughout the country, and President Cleveland, in his recent message to congress, had the following to say in regard to it:

"While contagious pleuro-pneumonia in cattle has been eradicated, animal tuberculosis, a disease widespread and more dangerous to human life than pleuro-pneumonia, is still prevalent. Investigations have been made, during the past year, as to the means of its communication and the method of its correct diagnosis. Much progress has been made in this direction by the studies of the division of animal pathology, but work ought to be extended, in coöperation with local authorities, until the danger to human life arising from this cause is reduced to a minimum."

Tuberculin is a recent aid to the diagnosis of tuberculosis. We have always lacked a sure method of diagnosing this disease in its earlier stages, which has practically made it impossible to carry out full measures for its suppression.

In December, 1890, Professor Koch announced his discovery of a substance which had a specific action on tubercular processes, which, when properly administered, caused a hyperæ around the tubercle, and an elevation of the body temperature. This action was not observed when the substance was injected in healthy subjects, or into subjects of diseases other than tuberculosis. This substance is known as Koch's lymph or tuberculin, and it was hoped for a time that it would cure consumption, but this has been abandoned. In 1891 Professor Gutman of Dupat, Russia, employed tuberculin as a means of diagnosis of tuberculosis in cattle. He found a temperature reaction in those diseases, but none in healthy animals. This substance has since been used in the diagnosis of this disease in every civilized country, and the reports are very favorable.

The imperial health officer of Berlin has recently published an extensive report on its use in the diagnosis of tuberculosis in cattle, which says it has been found reliable in all sorts of cattle. Even when the lesion is hidden and the animal appears healthy, tuberculin reveals the pressure of this disease.

The *Berlin Veterinary Weekly* contained an editorial, in a recent number, in which this statement occurred: "The proof which has been presented to our readers is more than sufficient. The results are absolute and gratifying, and show that tuberculin is a reliable agent for determining the presence of this disease."

We have killed a number of cattle which have reacted to tuberculin, and have found them tubercular in every instance, and when animals do not react after injection, it can be said, with almost absolute certainty, that they are free from tuberculosis. Results with tuberculin have been so satisfactory that it is considered one of the most important advances in veterinary medicine in recent years. The method of using it is as follows:

A 10 per cent. solution is made in a 1 per cent. solution of carbolic acid, and of this dilution 2.5 to 5 cc. are injected. This injection had best be made at about 6 a. m., at which time the temperature is taken. After three hours the temperature is measured at intervals of one or two hours for fifteen hours, and if a variation beyond normal occurs, it is a reaction, and the

animal is, in all probability, affected with tuberculosis. The amount of reaction varies from 2 to 6 degrees, and lasts from twelve to twenty-four hours.

With this to aid us, we are now in a position to battle with the disease as never before, and can enforce the regulations on the statute books.

By authority of the board nineteen horses condemned with glanders have been destroyed during the year. These have been generally isolated cases, but in one stable five of eight horses were killed.

A valuable aid in detecting obscure cases of this disease is mallein, a substance acting upon horses in a similar way to the action of tuberculin upon cattle. As far as the experience of this board is concerned, it has proven mallein a valuable and authentic test in all cases of suspected glanders or farcy, and a horse should never be condemned for this disease, unless it shows the most positive symptoms, without resorting to the use of this test under the supervision of a competent veterinarian.

But little hog cholera has been developed in the state during the year, and the board has been able to take hardly any action in regard to it. Advice has been given in all cases reported, and when there seemed imminent danger of a large outbreak, the board took all possible means to prevent its spread.

The quarantine regulations established between New Hampshire and Massachusetts by this board are still in force, and have prevented the introduction into our state of many tuberculous animals. One veterinary surgeon, who examined several herds for parties in Massachusetts, to be sent into our state for pasturage in the spring of 1892, rejected 27 animals as suspicious cases in the few herds that he examined. The quarantine regulations will probably be continued until there is less danger from the introduction of tuberculous animals from outside the state than exists at present.

While the people of the state should not be unduly alarmed by this disease, the board is of the opinion that the most vigorous measures for its suppression are not to be neglected.

The danger from tuberculosis to the herds of the state is a matter of trifling importance compared to the danger to human

life, and it becomes not merely a matter of financial importance to stock-owners, but one of interest and vital consequence to all our citizens. Every possible means of precaution should be taken, that the danger may be reduced to the minimum.

IRVING A. WATSON, *President*,
N. J. BACHELDER, *Secretary*,
State Board of Cattle Commissioners.

REPORTS

OF

AGRICULTURAL ORGANIZATIONS.

AGRICULTURAL ORGANIZATIONS.

The Public Statutes provide that the report of the secretary of the State Board of Agriculture shall contain such reports from agricultural organizations and societies as are deemed by the board to be of interest and value. The secretary has acted in accordance with a strong impression that the interests of agriculture could be subserved by the encouragement and support of all worthy agricultural societies within the state, and believes that some stimulus is given to these by public recognition of their proceedings in the agricultural report.

In this line the Grange has received recognition and encouragement. The dairymen's association, horse breeders' association, poultry association, and the various agricultural fair and creamery associations and farmers' clubs have always received encouragement, and been represented, so far as reports could be obtained, in the report of the board. The objects of all similar organizations are highly commendable, as they enable the farmer to reap the benefit of organized effort, the only means by which advancement can be made. In view of the importance of these organizations to the agriculture of the state, we are inclined to give what may be considered liberal space to the record of their proceedings in the report of New Hampshire agriculture.

GRANITE STATE DAIRYMEN'S ASSOCIATION.

OFFICERS.

J. M. Connor, *President* . . .	Hopkinton.
C. H. Waterhouse, *Vice-President*	Cornish.
J. G. Tallant, *Vice-President* .	East Concord.
J. L. Gerrish, *Secretary* . .	Webster.
N. J. Bachelder, *Treasurer* . .	Andover.

TRUSTEES.

O. M. Tenney, *Rockingham County*	Hampstead.
A. B. Locke, *Strafford County* .	Barrington.
G. S. Philbrick, *Belknap County* .	Tilton.
L. T. Brown, *Carroll County* .	Tuftonborough.
Joseph Barnard, *Merrimack County*	Hopkinton.
W. E. Gay, *Hillsborough County* .	Hillsborough.
D. W. Rugg, *Cheshire County* .	Sullivan.
G. W. Stanley, *Sullivan County* .	Langdon.
W. D. Baker, *Grafton County* .	Quincy.
S. T. Noyes, *Coös County* . .	Colebrook.

This association receives a small annual appropriation of the state, and holds an annual exhibition and meeting connected, for the discussion of dairy matters. Other meetings are sometimes held during the year. The annual exhibit and meeting for 1893 was held at Concord, January 25 and 26, and was successful in all particulars. The exercises, which commenced at 11 a. m., were held in G. A. R. hall, while the exhibit was made in the hall adjoining. His Honor Mayor Cogswell extended the following address of welcome:

Mr. President and Gentlemen of the Granite State Dairymen's Association:

It gives me much pleasure to extend to you, in behalf of the citizens of Concord, a cordial welcome to the city for the purpose of holding your annual meeting. The dairying interest of New Hampshire is an important and growing one, and I congratulate your association upon the good work which it has accomplished since its organization.

The state legislature acted wisely when it provided for an annual appropriation for your association, to be expended in promoting the dairying interest in this state. The appropriation is not large, but its judicious expenditure brings large results to the important interest which your association has at heart. There are few persons in our state who are not daily dependent upon dairy products in some forms for their sustenance and health, and the better the products can be made the larger will be the stock of health and happiness brought to the consumers of them. When I look back upon my boyhood, with its daily round of milking and frequent churning, and contrast the dairying methods then in vogue with the improved methods of dairying to-day, I feel that I ought to be a learner at your feet, and not intrude further upon your time. I trust that your ninth annual meeting will be a most interesting and profitable one to each and all of you, and when its programme of addresses, discourses, and reports, is ended, you can truly say this meeting has been one of the best in the history of the association.

President Connor then delivered his annual address, speaking as follows:

PRESIDENT CONNOR'S ADDRESS.

Gentlemen of the Dairymen's Association:

It is a source of congratulation that the year just closed has been one of more than ordinary prosperity for those engaged in the raising of dairy products. Prices have ruled higher than for several previous years. There has been a widespread apprehension that, in view of the great increase of creameries and the increased attention paid to dairying,

together with the enormous amount of bogus butter put upon the market, the business would be overdone.

The skeptic has fancied himself that the increase of dairy knowledge would make it possible for good butter to become cheap. All these apprehensions have failed. There never was a time in the history of dairying when the outlook for those who practise the best known methods was more promising.

It was my fortune to attend the recent meeting of the Vermont Dairymen's Association, composed of as intelligent and progressive a class of dairymen as can be found in this country. They bore upon their countenances evidence of satisfaction. New Hampshire may not be as highly favored in some respects as her sister state, yet we have a better home market and a wider scope for private dairying and the retail milk trade. We ought not to despair of our adaptability as a state for successful dairying, when we contemplate that within a brief period there has been established among us, by a Massachusetts hotel proprietor, one of the finest and best equipped creameries in New England, the products of which go to furnish two of the largest and most popular hotels in Boston.

I might instance another noted breeder and importer of fancy dairy stock, and equally noted for his fine dairy products, who, wishing to enlarge his business, built and equipped a fine creamery not far from the former, and is supplying Massachusetts and New York customers with its products. Both of these creameries are situated in central New Hampshire, where the pasturage and grasses are much inferior to what it is in the northern half of our state. If such results can be obtained where the original surroundings are only ordinary, surely we ought not to regard our state as possessing inferior advantages.

While we have in our state many other well equipped creameries, the products of which command the highest market price, and also private dairies of no inferior grade, we confess the presence of too large a class of farmers who practice a sort of mixed, go-as-you-please system of farming. This can never succeed. There must be a definite purpose,

and every energy turned in that direction. It must be evident to every thoughtful mind that the cow and her products, either for butter and cheese, or the milk for the wholesale or retail market, is the best and only real hold the average New Hampshire farmer has. Every indication points to the stability of this branch of farming.

The raising of pork, so largely sustained by the products of the cow, pays far beyond that of beef or wool. If then, these conclusions are correct, why should so many farmers persist in old-time methods, in keeping cows totally unfit for dairy work, and by ill-adapted methods render unprofitable such as otherwise might be made to pay the owners a fair profit.

It is not my purpose to enter into details as to the methods that should be employed from first to last in this important industry. Surely, if the ablest men we can employ cannot exhaust a single branch of this great industry in an hour's talk to you, I would not attempt, had I the ability, to cover the whole ground.

I am at a loss to know how to reach that great class of indifferent farmers who are just now making attempts to engraft themselves upon lines of dairy work, who have had faint glimpses of its possibilities, yet they refuse to place themselves in the attitude of learners, refuse to attend dairy meetings, refuse to put in practice "the line upon line and precept upon precept" which is continually being held before them. They think the right way is too expensive. They want somehow to get something for nothing. They want to gather where they have not strewed, and because they cannot, they join the army of calamity howlers and look back with distrust and jealousy upon those who do succeed, and refuse to be comforted, or listen to the gospel of dairy knowledge.

THE WORLD'S FAIR.

This memorable event, so near at hand, demands consideration from the hands of this association. I have received a communication from the executive commissioner of the New Hampshire Board of World's Fair managers, urging upon our association the importance of taking decisive action to

have placed upon exhibition samples of our butter and cheese products, and assuring me that in so doing we may rely upon the fullest coöperation of the board of managers.

Our varied manufacturing industries are abundantly able and enterprising to place their products on exhibition in the most attractive manner. An exhibition of our agricultural products is already receiving the attention of persons duly selected to attend to this branch of our agriculture. To this association is most fittingly assigned the duty of collecting and arranging for exhibition this, the most important, most profitable, and widely spread branch of our agriculture. The sterling qualities of New Hampshire's population, its sons and daughters who have gone forth to bless every community, is proverbial over the breadth of this whole country. Shall the dairy products of our state, now attracting so much attention, fail to be represented among the sister states?

At that exhibition will be represented New Hampshire's unsurpassed scenery, and every inducement held out to increase our immense summer travel. Shall we not, alongside with this, show to this tide of travel that the butter and cheese, the milk and cream of our herds, is truly fit to set before kings? Boxes of a uniform character and of tidy appearance will be furnished for the butter exhibit.

In conclusion, allow me to congratulate this association upon the array of talent secured to instruct our dairymen at this session all along the lines of their work. The work and influence of this association is no longer an experiment. The large and varied premiums it has been enabled to offer have brought out the finest exhibit of dairy products ever before seen in this state. If our legislature would raise the sum appropriated to $1,000, thereby enabling this association to hold dairy conferences in every county of the state, it would be an investment that would return tenfold to our agricultural industries. Far better to lop off some of the needless offices and expenditures, and thereby save this small sum to aid in what is of such valuable importance, and what now seems to be an awakening to a new life all along the lines of our material prosperity.

Allow me to suggest to the assembled wisdom of our state, if

some of the money now expended to pay the salaries of fish commissioners and to equip hatching establishments might not better be expended in efforts to "hatch" a breed of cows that would produce four hundred pounds of butter annually? An increase of only twenty-five pounds per cow annually means a net income to the people of the state of half a million dollars yearly.

It requires but little additional dairy knowledge to rise to this standard. We submit to the candid judgment of the people of this state, if the lines of economy do not lie along this path rather than the many doubtful schemes of stocking our streams with fish to be caught by a few sporting characters.

We have fish and game leagues that hold annually costly banquets, attended by many of the leading men of the state; but if we desire to elevate an industry in which thirty thousand farmers in our state are, or should be, deeply interested, we are permitted to go begging for funds or for an audience, or for the leading and influential men to help on what should interest every inhabitant of the Granite state.

Following, Hon. Moses Humphrey, president of the board of agriculture, spoke interestingly on the subject of dairying.

Report of expert judge was made by Hon. Z. A. Gilbert of North Greene, Me.

REPORT OF EXPERT.

BY HON. Z. A. GILBERT, NO. GREENE, ME.

Gentlemen of the Granite State Dairymen's Association:

Your judge of dairy exhibits, having attended to the duties devolving upon him, makes the following report:

REPORT OF AWARDS ON BUTTER AND CHEESE.

DAIRY PRINT.

W. D. Baker, Quincy	97 score.	1st.
H. C. Smith, Holderness	96 "	2d.
W. C. Pulsifer, Campton	95 "	* 3d.
A. H. Colby, Tilton	95 "	* 3d.

* Divided.

CREAMERY PRINT.

Elmwood Dairy, Quincy	96 score.	1st.
Guernsey Dairy, Contoocook	95 "	2d.
Contoocook Valley Creamery	94 "	3d.

DAIRY TUB.

Henry C. Smith, Holderness	96 score.	1st.
Mrs. C. F. Emery, Canterbury	95 "	2d.
George S. Philbrick, Tilton	94 "	3d.

CREAMERY TUB.

Hillside Creamery, Cornish	97 score.	1st.
Contoocook Valley Creamery	96 "	2d.
Lebanon Creamery, Lebanon	93 "	3d.

UNCOLORED BUTTER.

J. M. Connor, Hopkinton	97 score.	1st.
G. E. Barnard, Hopkinton	92½ "	2d.
M. H. Merow, New Hampton	90½ "	3d.

Sample by W. D. Baker for scaling only—sweet cream—scored 93.

GRANULAR BUTTER.

In this class there was not a model sample on exhibition. The sample awarded highest prize was slightly too coarse and somewhat uneven. Those awarded the other two were too fine.

H. C. Smith, Holderness	1st.
R. T. Gould, Hopkinton	2d.
Guernsey Dairy, Contoocook	3d.

CHEESE—PLAIN.

J. W. Pulsifer, Holderness	97 score.	1st.
T. S. Pulsifer, Campton	95 "	2d.
D. B. Pulsifer, Campton	94 "	3d.

SAGE CHEESE.

T. S. Pulsifer	98 score.	1st.
J. W. Pulsifer	93 "	2d
H. C. Smith, Holderness	92 "	was

good enough for a third, but none was offered.

For five butter exhibits scoring nearest the prize takers:

J. W. Nye, Keene	94½
Claremont Creamery	93½
Mrs. E. Danforth, Hopkinton	93½
Lebanon Creamery	93
G. B. Matthews, Franklin	93

Each $2.

Of butter there were one hundred and two samples on exhibition, and fifteen of cheese—the largest exhibition of the kind thus far made in New England, the present winter; and we believe the average score of the exhibits has in no case been excelled in the same time.

Prof. I. P. Roberts, of Ithaca, N. Y., spoke as follows on Food and By-Products of the Dairy:

FOOD AND BY-PRODUCTS OF THE DAIRY.

BY PROF. I. P. ROBERTS, OF CORNELL UNIVERSITY.

I come to you with a plain and apparently simple subject; yet it is one of the most difficult ones which we have to meet.

Darwin, after devoting many chapters to facts, sums up as follows:

"Excess of nutriment is, perhaps, the most effective single cause of variability."—My remarks will be designed more specifically for the small dairyman, because he is the one who has the least opportunity to grasp the great problems of dairy husbandry, not being bronght into contact with those who have wealth and leisure.

Food plays such an important part in the growth, development, and quality of plants and animals, and man as well, that it is worth our while to consider most carefully how the food of

the dairy cow affects her product and value. We speak of the dairy cow when we should begin with the dairy calf.

The small dairy can be managed with more skill than the large one, because the owner can give immediate and personal attention to all details. He has many opportunities to discover the value or worthlessness of the cows in his dairy, whereas the large dairyman must trust to hired help very largely. But the small dairyman finds that he does not produce enough milk to sell it upon the city market, nor enough to enter into the manufacture of cheese, and often scarcely enough to justify him in taking it to the cheese factory or creamery; so he is forced by his circumstances to make butter on the farm. This is well, and I wish we could encourage this practice more and more, now that we have the modern facilities for saving labor and for taking all of this butter work out of the farm kitchen.

Again, I would urge the farmers to manufacture, that is, concentrate; that is, add greater value to their products by adding skill. Those who sell the crude products unmanufactured, those who grow raw products by unskilled labor, get the lowest rewards, while those who add skill to the raw products get the larger rewards, according as that skill be great or small.

Again, selling milk, as now practised, to the butter and cheese maker tends to lower intelligence, morality, and honesty, because the producer is not required to gain any knowledge of the fine art of manufacturing milk into its various products; he has no incentive to thought, and so gradually sinks into mental lethargy. The method of selling milk, not according to value but according to volume, tends to lower the standard of right and wrong. If A sells milk for the regular price which is worth fifty per cent. more than that which B sells to the same company or individual, B knows that he is committing robbery; and legal robbery demoralizes the robber quite as fast as illegal robbery. A knows that he is being legally cheated, with no recourse but to cheat B and C in order to get even. So A purchases cows which produce milk which stands dangerously near in butter fats to the legal standard, or his boys increase the volume of the milk without adding to its value, and justify their consciences because they are being legally cheated, and there is

no other redress. All these practices are tending, not only to lower the standard of the cows, but the standard of right and wrong and the standard of morality and honesty in the boys of the land. The boy brought up to get even by so-called justifiable means finds it but one short step, like the horse jockey, to justify any means which places him ahead.

To start right is half way to success.

If food plays such an important part in the success of the dairy, then we are justified in regulating the food of the sire and dam of the coming cow even before conception, for if the parents are fed and cared for as we usually treat the best beef breeds, then we have taken one step towards variation. This is just what we want to do in the breeding of cattle—cause them to vary; but the variation must be for the better and in the line desired, or our variation, instead of carrying us farther towards the desired object, carries us farther away. If this feeding of the parents even before conception is carried on according to the law of beef production, a new quality is introduced into the blood of the embryo calf, then we cannot hope to get so good a dairy calf as we would, had the sire and dam, at the time of copulation, been in the condition in which all dairy cattle should be kept, moderately lean.

From the moment the calf is born it should be watched and trained for the dairy as carefully and scientifically as is the trotting colt trained for its work. It has been discovered that in order to get the best results the trotting colts should not only be bred, but fed, towards the uses to which they are to be put when matured. Should the trotting colt be fed like the draft colt, then we might expect marked variation, for the worse, to appear before maturity, if a fast horse was desired. This would be a very foolish and a very unscientific treatment of the animal. If the dairyman were to use a tithe of the skill in feeding the dairy calf that the horse-man shows in feeding his colts, we long since would have doubled the product of each individual dairy cow.

Take the dairy calf at birth, we find it unable to digest and assimilate coarse and innutritious foods. Its delicate digestive organs can only take care of those forms of food which

are easily broken down and assimilated, such as new milk, but if the calf is fed with an *abundance* of new and rich milk it soon inclines to fat, and this is just what the dairyman does not want. He would, if possible, teach this young animal so that in future life it would put the fat in the pail instead of on its ribs; and so the utmost care should be taken to feed the young calf in order to produce vigorous, healthy growth, to grow to a reasonable extent the abdomen, the stomach, and the internal viscera, without inducing the storing up of tallow. Great care should also be taken not to have the food so concentrated as to dwarf the viscera and contract the stomach, neither should the food be so innutritious and bulky as to distend the stomach to such an extent as to injure and weaken the power of digestion and assimilation. Calves can be raised on whey or watered milk, but the results are not satisfactory, because too great a bulk must be taken into the stomach; bloating, colic, and indigestion are likely to follow, and serious injury to the calf results. It should be remembered that the dairy calf is mother to the dairy cow, for as the calf is, so will it be when it becomes older. Neither should the dairy calf be fed largely on concentrated food, such as corn, cotton-seed meal, etc. If this young calf lay on flesh, and even some fat, while being fed succulent foods or on pasture, no evil results follow; but flesh and fat laid on by the feeding of concentrated and heat-producing foods, are sure to affect the usefulness of the future cow. If the dairy calf has the dairy instincts this soft fat put on with grass will disappear as soon as the demand for milk is made after the first calf is dropped. The two-year-old heifer, having been raised according to the law of the dairy, drops her first calf when she is quite immature, and this is done in order to get her started in the right direction early in life; but just here is a critical point, she is only a calf herself, she has produced a calf, and has been so bred for special purposes for hundreds of years that she is likely to give her life, in part at least, to her owner; and at this critical period of her existence she is often bred again when she is scarcely more than two years old, so the demand for the growth of herself, that of recuperation which is needed in order to replace the

vigor that she gave to her first offspring, to furnish material for the upbuilding of the calf in uterus; and last, and usually greatest of all, the material needed for the production of a large quantity of rich milk. Just here is the most important part of the life, welfare, and future value of the young cow; if she is not now fed liberally and scientifically she will always be handicapped. First, she must take a reasonable amount of food for her own subsistence, and secondly, she will make an effort to give milk, and thirdly, she will sacrifice almost any of her bodily needs for the upbuilding of the calf in uterus. Her ancestors may have been so nicely educated to the work of giving milk that her inheritance will, in spite of all these demands upon her system, induce her to give milk until her constitution and vitality are sapped, and she becomes a prey to the slightest adverse conditions. Some of the dairy farmers turn these delicate two-year-old heifers out in the April wind, because somehow they imagine that the cow needs some exercise and sunlight; when, if the fact was known, these delicate heifers, whose conditions have already been sapped by the production of young and milk, require warmth and quiet and not motion and cold.

The foundation is laid in these raw March and April winds for the easy introduction of tuberculosis. This delicate heifer should receive a liberal amount of succulent and nutritious foods. She should be petted, if you please to call it so; she should have the very best of care and surroundings, in addition to the very best food that is in the barn or that can be secured. The Hollander purchases the oil meal which is produced on the prairies of Iowa, and feeds it to these delicate two-year-olds, seeing to it that they drop their calves in the stable where they may have daily and hourly attention, and seeing to it also that when they are turned out in the early spring they are supplied with comfortable covering while running at large in the pastures. It is no uncommon thing, even late in the summer, to see the valuable heifers, and cows even, wearing blankets in order to protect them from the annoyance of flies. This so-called "dumb Dutchman" has long since learned that every unit of suffering produces two units of diminution in the product of the cow.

The food of the dairy cow, especially when she is producing milk, should, first, be palatable—that is, rich in the volatile, aromatic oils; and second, it should be digestible and contain a fair amount of moisture, but not so much that the animal will not insalivate its food while eating; thirdly, the food should be abundant, because surplus comes from abundance and can never be produced profitably in any other way. That the cow will do fairly well on dry food, or on concentrated food, or but little food, for a short time, cannot be denied, but in the end any restriction of quantity or quality will reduce the ultimate profits. Because a cow will eat dry corn stalks and give for a time a fair amount of milk without grain, and sometimes without shelter, does not prove that corn and the open field are the best factors or the most profitable ones for producing a large flow of milk with the greatest abundance of butter fats.

We have laid much stress on the balancing of rations. That is, we have said that the rations should be about one part albuminoids to five and one half parts of carbo-hydrates; but this balancing of the ration, as we term it, is often very misleading. The young animal needs a more nitrogenous ration than the mature one, and those kept in a warm stable need far less carbonaceous matter than those kept in a cold stable. We have computed the value of foods for the dairy by calling the albuminoids worth about three times as much as the carbo-hydrates. At the present time albuminoids can be purchased in the market for a price only a little exceeding the price of carbo-hydrates.

While this discussion of the foods and their effect on the dairy has led to very beneficial results, it must not be supposed that we have exhausted the subject. While we have said so much against corn in recent years, it still is a well known fact, by those who have made a careful investigation, that there is no other food on the market that can be secured at so low a price to-day, according to its feeding value, as corn. This does not imply that the excessive feeding of corn, and feeding it in wrong forms, is not only expensive, but often injurious to the animal. From the feeding of all corn, as practised in the West, has come the reaction, and now the feeding of nitrogenous food is likely to supplant carbonaceous food more than it should.

Timothy hay, near Trenton, N. J., I am informed, sells for $20 a ton, while corn ground with the cob is worth but $16 per ton. Every practical feeder in New Jersey will tell you that one ton of meal will go very much farther in producing milk or growth than a ton of Timothy hay. This is not advocating the practice of feeding corn universally, but rather calling the attention of the dairymen to the fact that corn is one of the cheapest foods that is on the market to-day. In fact, I know of no one that is so cheap, and it can be fed in quite large quantities provided it is fed with foods that are not so concentrated and those that are fairly rich in albuminoids. Take for instance the composition of corn, we find that it is not so very low in albuminoids after all has been said. A ton of corn meal contains one hundred and sixty-seven pounds of digestible albuminoids, while a ton of clover hay contains one hundred and fifty-seven pounds. It will be seen that the corn meal contains a large amount of albumen, and since it is relished by the animals, it plays and should play an important part in the ration of the dairy. It also gives character and stability to the butter as no other food does. We may argue as we will, that it produces the hard fats that are not so digestible as the softer ones, still the market demands a hard butter, and when in not too great excess, it helps to sell the butter more than the soft fats do.

While we should lay great stress on the food of the dairy, the water, the stables, and the environment play such important parts that no amount of scientific feeding serves to overcome neglect in the other factors of success. More than this, no amount of feeding will overcome bad inherited qualities. They may modify them, but inheritance plays such an important part that any dairyman is unwise who does not lay great stress on the quality of the ancestors which give to his dairy inferior or superior tendencies.

We should have more breeds and more varieties of cattle in the United States, in order that we may have animals which are best for any given locality. These animals should be bred in or near that locality where they are to be kept. Then, too, if we breed a large number of varieties or breeds, the effect is to

stimulate the dairyman to produce better animals than those that are now bred of mixed blood. If the dairy was really well bred, the calves, or at least the females, would be of considerable value. Then, too, when an effort is made to improve the dairy on right lines, there will always be a nice income from discarded cows. There should be other income from the dairy than that produced by the selling of the hundred and fifty pounds or so of butter per cow a year, at a price not much exceeding, if any, twenty cents per pound. The by-product of skim-milk alone should foot up at the end of the year a nice sum, especially now that the markets of the world are open to our hog product, with the prospect of high prices for pigs and pork for several years to come. This skim-milk at present prices of pork is worth not less than twenty cents per hundred, and under exceptionally good conditions thirty cents per hundred may be realized. Even the whey can be made to produce considerable value if one knows how to feed it. It should be taken to a field at some distance from the factory, where it may be spouted into large, heavy troughs, into which has previously been put a little corn meal. Upon this food, in connection with the grass of the field, may be raised a large number of swine at a fair profit.

To summarize: First, there should be an income from the butter, and butter should be the main object in the New England states for various reasons: it can be made easily at home; it can be sold at high prices without the intervention of a middleman, or the danger of loss from storing. The standard of butter production should be not less than three hundred pounds per cow per year, and the price not less than twenty-five cents per pound. An income from the calves of twenty cows of a well-bred variety of cattle should be worth not less than $50. At least I have no difficulty in selling high-grade Jersey and Holstein heifer calves for $5 apiece. Each year in the dairy of twenty cows it will be found necessary and profitable, until we acquire more skill, to dispense with or kill at least one fifth of the dairy annually. These discarded animals should bring not less than $30 apiece, or $120. The cow that produces three hundred pounds of butter, will usually produce six thousand

pounds of milk; and this, when skimmed, at one fifth of a cent a pound, brings an income from this by-product of $12 per cow. Summing all these up, we have $75 for butter, $50 for calves, $120 for beef, and $12 worth of pork from the skim-milk of each cow, making a total of $1,900 income from a dairy of twenty cattle. It is not too much to say that the manure from these animals is worth $100, making a total in round numbers, of $2,000, or $200 per cow, per year. True, four young two-year-old heifers have been put in the place of the four discarded cows. We sometimes think that the dairy does not pay; and it does not if little or nothing is secured from the by-products, which are often worth, when well utilized, quite as much as the butter upon which we lay so much store. Here in New Hampshire, on this soil which is supposed to have been depleted of its fertility, three acres of land will keep a cow if properly cultivated and managed, and twenty cows will keep a family of five persons in a very comfortable and respectable condition.

GOVERNOR HOARD: I want to emphasize one thing that Professor Roberts has said. The wise adaptation of means to ends on the farm, is very often neglected. In the order of the world there is a very wise injection of economy. There is the bull—what does he do? Prances around, bellowing out challenges to all creation, everybody afraid of him. Why not put him on to the crank and let him turn the separator? He has to do it around in our vicinity; and I notice he is a good deal like his master: when he works hard he is very thankful, he is not into mischief, and he do n't want to fight. The exercise is good for him.

Professor Roberts has said that feed modifies breed, and he is right; but the reverse is true also—breed modifies feed. For instance, I bought an excellently bred Durham cow, and put her by the side of a distinctly bred Guernsey cow; and I fed them both to the point of their capacity. The Guernsey produced butter, but I had to stop short off on the Durham bred animal—I could not carry the feed up to an economical expenditure in that animal. Why? Because breed modified the feed. She stopped giving milk and butter and went to putting flesh on to her ribs, and I did n't want it. J. I. C. is a trotting

horse; the product of twelve quarts of oats is 2:40. Now you may turn ten tons of oats into some horses, and you could not get it in four minutes.

The farmers of Vermont and New Hampshire are talking about abandoned farms, when really, my friends, there are more abandoned farmers than there are abandoned farms. Talk about competition with Wisconsin. Why, bless you, we compete with one another a great deal more than we do with you. Skim-milk to-day is worth thirty cents per hundred. To-day I cannot buy it of my own patrons for twenty-five cents. I had, I think, forty pigs weighing one hundred pounds each; bought them at $4.50 per hundred, fed skim-milk for one hundred and fifty days—fed it so that every farmer that I was trying to convince could not say that it was a different system than he would use himself, and the pork stood me in twenty-two cents and a half per hundred. One reason of the success is because they were young. If you undertake feeding an eighteen-months hog you have passed the economic point. That demonstrated to my patrons the value of skim-milk. To-day I feed it in conjunction with shorts, middlings, and corn meal. Subsequent experiments have demonstrated that I could have left out the corn meal and had the milk net me twenty-seven cents. I would not feed meal alone with skim-milk; I would feed it in conjunction with shorts, and maybe a little oil meal. I notice that the action of these feeds is vastly more economical and effective than either of them is alone.

As to the amount of butter a cow will produce, the professor says three hundred pounds. I have a number of copies of the *Dairyman* here, and you will find in the last issue a letter from a man in Cabot, Vt., who made four hundred and six pounds a cow. I have a number of neighbors about me who have exceeded three hundred pounds per cow. They are scattered all through this country, the men who are making more than three hundred pounds of butter. But, my friends, they are like hens' teeth, and the men who don't get over one hundred and fifty are vastly in the majority. I think that the difficulty lies with the man and not with the cow. I said last night, and I reiterate it, that if the cow could talk, she would

be heard all over the land, calling for an improved breed of dairymen.

PROFESSOR ROBERTS: Last year we weighed the feed of every cow separately, and weighed the milk of every cow, and tested every cow every day. It is wonderful to note the difference there is between cows. No intelligent man has a right to keep cows without testing for quality and quantity. Although the feed, selection, and care in the course of years produce those qualities we call breed, breed itself is sometimes of such overshadowing importance that we get no results if we disregard it. Both breed and feed are to be considered. A chain is as strong as its weakest link. If you get a poor cow you are sure to fail; if you get a good cow and feed poorly you will also fail.

MR. COLBY: I like to come to these agricultural meetings and hear people talk to us what we as New Hampshire farmers ought to do. They say we should do certain things to make our farming successful. If we do those things we must have some one to do it. No farmer can milk ten or fifteen cows and personally attend to making the butter. I would like to ask what amount of plant a man must have to think that he can afford all these labor-saving inventions. Now the ordinary New Hampshire farmer is different from the Wisconsin farmer that the governor has described, and from the New York farmer that the professor has told us about. I think that the average New Hampshire farmer keeps from three to seven cows. He cannot afford to have all these labor-saving inventions, considering the amount of business he does. And the brains necessary to run this machinery is something he is lacking in. I keep from five to ten cows, and I have a kerosene engine, but I see no way that I can harness that engine to my churn or separator, because my plant is not sufficiently large to warrant the expense. I like to come to these agricultural meetings and hear the gentlemen tell us what we should do to better our condition, but I don't like to have them think that we are so large that we can afford all these things, because it seems to me that we cannot.

MR. HOARD: I like the tone of these remarks, and I welcome such statements. My friends, I want to say this: sometimes

we get to taking altogether too narrow views of what we can afford. You say you cannot harness your little oil engine to a separator. What is the rate of interest here? What you can afford to do depends on the rate of interest. You are querying in your mind whether you can afford a separator for five or six cows. The question is variously answered. Some men say yes, and some say no. But I notice one thing: that the man who has the separator, whether he has six or sixty cows, says yes, and the man who does not have it says no until he gets one. In the setting of milk in Wisconsin and New Hampshire there is no difference as regards the cream rising. The average setting of milk loses from eight tenths to one per cent. of the butter fats. I will state from five tenths to one per cent. Now that means from one half a pound to a pound in every hundred pounds. Take the ordinary shallow setting or the ordinary deep setting, and I will guarantee to take the Babcock tester and find almost invariably from five tenths to one per cent.

The question is not whether you live in New Hampshire or in Wisconsin; it is the question of economic application of means to an end. You bring up the question of the number of cows. I used to have to milk ten cows in the morning. I would not, if I could get a hired man to do it at any ordinary wages. But if I had five cows, or ten cows, they would be the best cows I could lay my hands on. One man said the other day,—"You keep preaching about three-hundred-pound cows. Why, God bless you, where are you going to be if every man's cow produces three hundred pounds? We cannot get rid of what butter we have now. You are going in the wrong direction." "I will give you a way out of it. Keep half the number of cows, and twice as good ones." What I am getting at, is more money to the farmer—more net money in his pocket at the end of the year. I know the toil and exactions of a farmer's life; I know the demand it makes on his spirit and courage; I know the stings of poverty; and I know something about the rewards of thought and labor. If we could only get into our minds the fact that the question of habitat has little to do with the matter, that it is the application of principle, we should advance one step. My little boy was studying mental

arithmetic. I picked up his arithmetic and said, "Thomas had five potatoes, James eleven"—and his little face grew cloudy at once, and he says, "Papa, it don't say potatoes, does it? Don't it say apples?" "Yes." Then he cried, "I can do it if it is apples, but I cannot do it if it is potatoes." Now the difficulty with my boy was that he had not discovered the principle involved in the solution of the problem. The difficulty with me constantly is to understand principles; methods very quickly come. Ordinary common gumption sees a way at once almost to apply principles; but the difficulty is to discover the principles. The why, I believe, needs to be learned before the how. I would in this case say that every farmer, whether he owns three cows or thirty, whether he has a separator or not, should have a method of determining the butter fat. The Babcock tester can be purchased for a small price, and it is simple in operation. I test in my five creameries the milk of three hundred and sixty cows every morning, and every man gets his pay according to the deeds done in the body.

Hon. Z. A. Gilbert spoke upon "Quality—How Secured and how Preserved."

QUALITY—HOW SECURED AND HOW PRESERVED.

BY Z. A. GILBERT, NORTH GREENE, ME.

Quality, as applied to butter, is a compound term. It is made up of several factors, each important in its place, and none of which can be left out without seriously impairing the product. It is my purpose at this time to speak briefly of each factor in its turn, giving, so far as able, the source from which it comes, the means by which it is made to fill a desirable place in the finished product, and the methods through which it may best and longest be preserved to please the fancy or satisfy the palate of the consumer. In starting out with such an effort, I am perfectly aware that all matters in this relation are not yet settled. If they were, there would be no call for this convention, or for the deliberations which are to engage the time while you are here assembled. I recognize the fact, also, that there are many able men at the present time at work on the intricate yet

important problems surrounding the business of the butter producer, and that if one is not a close student of his work he will soon find himself in the rear ranks of the profession and hampered by ideas, methods, and practices out of date and as undesirable as the product he is making. In this connection we owe much to the work now being carried on by the scientists at our experiment stations. Supplied as they are with every needed facility for carrying on detailed and accurate work, through their assistance the advances made of late in a detailed knowledge of the business have been rapid. Yet while we accord to the scientists their full measure of credit, we should not fall into the error of conceding all knowledge to them, and then leave them to continue the investigations alone. Intelligent men engaged in the business have done their full share in the past in advancing dairy interests, and their efforts are still needed. That the practical dairymen of this state are active in their part of the work, there is ample proof at this convention.

SCALE OF POINTS.

The scale of points arranged for the guidance of judges in making the awards at prize exhibitions, is supposed to represent the factors making up the finished product, and to show their relative importance towards each other. The scale prepared for the butter exhibition at the New York Food Exposition, and adopted by you at this convention, is:

Flavor, 50; texture and grain, 30; color, 10; salt, 10; in a total of 100. This schedule fails to cover several important factors involved, and would hardly be a safe guide if allowed exclusively to govern the judgment.

At the Orono (Maine) dairy school a more complex scale is in use with the students, made up as follows:

Flavor, 40; make, 20; solidity, 12; grain, 12; color, 8; moisture, 8; salt not going into the account unless excessive, and then discounting according to defect. This scale makes a closer analysis than the first given; yet it fails to cover the full ground.

A scale that better corresponds with my judgment is as follows:

Flavor	40	Color	8
Make	10	Water	12
Solidity	12	Salt	6
Grain	12		
Total	100		

This scale fails to recognize all the factors involved in the finished product; yet it is sufficiently full for ordinary work in judging. Other factors, not named in the schedule, that go to make up the full measure of quality, are so closely interwoven with those named as to be with difficulty distinctly separated and considered in their individuality. The more important of these will be referred to later on.

FLAVOR.

The leading factor involved in the quality of butter, that which is most important in the whole list in giving it character and value, is flavor. Words fail to describe just what is meant by this term, or just what is desired in its excellence. You who eat butter all know what flavor is; yet can hardly tell it to a second party. The flavor of good butter is that combination of aroma and palatability which gives such satisfaction and delight when in contact with it, that after eating you want the more. In a fine product this flavor must be present in a high degree. There is much butter made that is simply negative in flavor—that is, it has no flavor either good or bad, about it. This is particularly the case with much winter-made butter. While butter with no taste is not as objectionable as that loaded with bad flavors, yet such is not good butter. The real high-toned deliciousness should be present, or the product will not pass as of good quality. The flavor must be positively good.

The highest ideal of flavor in butter comes from the sweet hillside grasses in sunny June. Other seasons are only approximations, and never quite reach the perfection of the ideal. The memory to him who is fated to live within brick walls, and travel only stone pavements, of "mother's sweet June butter" is not a myth of childhood, but has a reality in fact that only the season of roses and clover blossoms and the freedom of fresh pastures can give.

This invisible, intangible deliciousness comes chiefly from the flavoring oils of the food of the cows, intensified, possibly, by the purity of the surroundings, and by the health-giving sunshine. The claim that any share of it is in breed is all "in the eye," and the assertion will never stand the test of unbiased investigation. I claim a high appreciation of the Jersey cow as a butter maker; but pure flavors, shorn of all surroundings that give a reality to a vivid imagination, are present in the butter from other breeds, just in the proportion that the feed is sweet and pure, and the environments in accord with the best.

Different fodder materials carry differing flavors into the product. Lowland pasturage, with a mixture of the inferior grasses natural to such lands, never tone up the flavor of the product to that standard reached on the honeysuckle, blue grass, and red-top of the highlands. Corn meal has no marked flavors antagonistic to what is given from good English hay. Hence the claim of great excellence of product from corn meal and good hay. Cotton-seed meal, as all know, has a flavor peculiar to itself. Fed in quantity sufficient to dominate over the rest of the ration, this meal is sure to carry its peculiar flavor into the resulting product. Wheat bran, also, and linseed meal, each has a similar effect. Skilled tastes will readily detect the differences coming from these different fodder materials, when liberally fed.

Corn, either fed from the field or well preserved in a silo, will carry a fairly acceptable standard of flavor to the product. Corn, as you all know, is closely allied to Timothy grass in all essential characteristics; hence the standard of flavor resulting. But corn carried to an extreme acid condition in the silo, and advanced to a partial decomposition, if fed in liberal rations daily, is sure to contaminate the product. Green clover fed from the field at that immature stage before sending up its seed-stalks, is too much of a good thing, and advances the flavor to a degree so far above the standard as to give an excessive "grassy" flavor, sometimes called a "cowy" flavor, and which is very objectionable and even nauseating to some people. But clover in its maturity of growth, and bearing its wealth of blossoms, is the very perfection of fodder for excellence in product.

Sweet, fragrant hay, stored without must or taint of any kind, is a desirable fodder material for butter-cows, and, other accompaniments being favorable, will carry a good standard of flavor into the product. Many dairymen will not admit that these variations follow these different fodders, and claim they have never been able to discover the differences. No doubt the declaration that they cannot discover the differences is correct. The reason, probably, is that they are not skilled in the testing of the product—have not cultivated their taste nor trained the eye till they have become skilled in that direction. Very few dairymen are skilled judges of the product.

The claim is being brought forward that the flavors of butter are modified in a measure by sunshine and temperature, but nothing definite has yet been brought out. We can well imagine how such a subtle influence as sunshine may have an effect in perfecting the work the cow is designed and so well fitted to perform. Sunshine and pure air promote health, and perfection of product must, we claim, have an intimate relation with the life it brings forth. Certain it is we cannot make summer of winter, and up to the present time the most skilful hands have not been able to make June and September flavors in February. All efforts are only approximations. The claim is pretty well substantiated that it takes far more skill to feed and care for a cow as she ought to be, than to properly handle the product.

There is pretty good evidence accumulating that an undue low temperature with milk and cream measurably kills the flavor of the resulting butter. This is a matter, however, that has received but little attention up to the present time. It is well known that freezing injures the flavor of many animal products, and why may not this be equally true with cream and its resulting butter? Did any one ever make deliciously sweet and high-flavored butter from cream after it has been frozen? Certainly this is a matter calling for more attention than it has ever received.

So long as foods flavor the product, it is proper in this connection to say that all cattle-foods are best when used in a form the nearest possible to the condition that nature hands them over to us. Mark it, that all departures from this are damaging. It is in this condition that you get the best results and the best

flavors—the best, because natural. Hence all acid fodders, such as ensilage, sour milk, brewer's grains, are no improvement on the natural product. Where the acid is developed to a high degree, and the fodder fed liberally, it is sure to affect the resulting product. The argument that has been put forth, that this acid condition, being similar to the change first put on in the stomach of the animal, is an aid to digestion, and therefore a benefit to the fodder, is not sound. The organs of the animal are fully prepared to work all changes in the food necessary to the digestive processes.

Frosted grass and musty hay and grain have been injured just in proportion as they have been changed from their natural condition. Corn fodder, mouldy, black, and tender, cattle will eat; but it has been injured by the destruction of its natural flavors and a loss of food nutrients. Besides, the appetizing aroma of choice butter never comes from acids, mould, and decay.

The flavor of butter is brought out or intensified by the process designated as ripening the cream. Just how this process works its effects is not well understood, yet the result of the process is unmistakably there. Before the ripening process the flavor is tame and obscure. The aeration and the development of a slight acid condition builds up both aroma and the flavor so that they stand out far more distinctly. Much talk has been made, more silly than wise, by certain parties wishing to appear progressive and show off their trumped-up wisdom, by referring to the process as the "rotting of cream," all unmindful the while that the "rot" was in their specious seeming, while the ripening of the cream is the development of quality in the product. This ripening, in effect at least, is akin to the change that is effected in the ripening of fruit, by which the rich juices and delicious aroma of the Bartletts and Seckels are perfected and brought out. Nature does not drop her richest gems to hand in full perfection. Time and her secret processes are needed to develop stores of latent richness otherwise unknown.

The flavor in butter is easily vitiated by the improper handling of the cream from which it is made. Any slight variation from established methods is sure to be represented in the product. A private dairyman in Maine, noted for the high standard of his

make, sets it down with emphasis that "any deviation from the right will spoil the product."

Improper surroundings will soon vitiate the flavor of butter. On the occasion of a trip through Canada in company with a well known butter expert, the remark was made by my companion that we should get no good butter till we arrived in Vermont. Arriving at the Welden with anticipations of a rich treat from the product of "the largest creamery in the world," we were not a little disappointed on having set before us plats of butter utterly spoiled by musty surroundings. The delicate flavors of butter are very sensitive to impurities, and extreme care *must* be exercised that everything surrounding or in contact with it is pure and sweet. No other course will protect its delicate touches of flavor and aroma from contamination and rapid destruction.

Exclusion from contact with the air will best preserve the delicate flavor of butter. Air is a destructive agent. Its oxygen will seize upon the brightest Damascus blade, and in time consume its every part. The prevailing method of putting butter up in form to invite quickest destruction of its gilt-edged properties, seems to be unfortunate, at least. But so long as the fancy of purchasers calls for print-butter, the rule is mandatory. The present practice, however, of wrapping each print in air-tight paper is to be commended, and seems to be the best thing to do under the circumstances.

An experiment in freezing butter for long storage was tried in Boston last summer with very satisfactory results. The butter came from its frozen quarters apparently without change from its long storage. If this method proves as successful on further trial as a single season's experience has shown, it will be a boon to consumers and will work important changes in the butter trade.

But the finest touches of flavor and aroma are volatile, and under the best of care cannot be retained in full measure any considerable length of time. However, the best made butter keeps best, so that the means through which its quality is best preserved will appear as we go on with other factors of the problem.

MAKER.

As a distinct factor the *make* of butter is not perhaps of so much importance as some of the others with which we have to do. In your scale you have omitted it entirely, yet if it were omitted or overlooked in the manufacture there might important defects go unnoted. By *make* is meant that part of the work or manipulation of the product which puts it into the condition and also into the form accepted as the standard. It is independent of all other factors of our subject, and involves the appearance of the common body of the product, and also the condition in which it is left from the last touches of the maker. As an illustration, if a tray of prints is left dowdy and dauby, or a firkin of packed butter is filled with white specks and left streaked and unfinished, its make is defective. These defects are important, yet they have no relation to flavors, solidity, or grain. In the scale you have adopted there is no place to cut the standard for such defects.

As to white specks, I know nothing of them, only negatively. I have had many inquiries in regard to white specks, have seen samples at exhibitions flecked with them, but in thirty years' experience as a dairyman have never seen anything of the kind in my own make. When the different processes are properly carried on there will be no specks in the product.

The manipulating, commingling, and working of the product should be such as to evenly mix all the parts and compact the mass into a condition of uniformity throughout. When cut down it should show a perfectly uniform condition and a compact, unbroken surface like that of solid marble. The best made sample of butter I ever saw, among the many thousands it has been my privilege to examine, was shown by the late Mr. Bowditch at one of the Bay State exhibitions. This sample cut down as compact and uniform as marble itself. Such butter will keep, for there are no air spaces where the destructive agencies can put in their work. It does not require that butter should be overworked in order to bring it into this perfect condition. In fact, I question whether this cry of overworking butter has not been rung altogether too long and too loud. Certain it is there

is altogether too much butter put on the market that is underworked, and left in a porous condition and full of water, and in a state to invite the quickest possible destruction. Exposed on the market, or held for a brief time, its quality goes down like a frost before the sunshine of the morning. True, such butter is taken and handled by dealers, but place the better make in its stead, and dealer and consumer will be better satisfied with the arrangement.

SOLIDITY.

Solidity is the property of standing up in a firm condition under the presence of a high temperature and rendering the product susceptible of being handled and transported without injury. The property lies chiefly with the cow, and is a characteristic of breeds. Guernseys probably represent the extreme of this characteristic, and Jerseys are a close second. Late experiments are showing that the solidity of the product is modified in a measure by the feed. This, however, is of small importance beside the fact that the property under consideration is seriously affected by the care of the milk and cream and the manipulation of the product in the different processes of making. Solidity can be broken down by churning at too high a temperature and churning too long; and by working when the product is too soft, and grinding it down when too hard.

Solidity is always a desirable factor, though possibly of less importance now than formerly, since under present practices of handling, holding, and keeping, always in connection with ice, slight variations are not so objectionable. Shades of defect in this regard are now overlooked by dealers, though firmness is still a desirable property. Butter made from separator cream, and that churned from sweet cream, is comparatively defective in solidity, while that from the butter extractor has little evidence of such a property about it.

GRAIN.

Grain is the twin sister of solidity, yet it has an individuality of its own, distinct of its kind. Like solidity, it has its origin in

the cow, and all adverse conditions destructive to the one affect the other, so close is the relation between the two. Grain is that property by which the particles of butter and the butter globules stand out in their individuality and show for themselves that the product is not made up of amalgamated grease. When broken apart the grain stands out distinct, prominent, and clear-cut, like the crystals in broken granite. This property gives the product a bright, sparkling, lively look, and a waxy consistency, attractive to the eye and inviting to the palate. At all times a good grain is a high qualification. Its absence leaves the product greasy, dauby, adhesive, and essentially defective.

This property is more plainly marked in the cream from some breeds, and probably finds its origin in the size of the butter globules of the milk. Grain is less distinctively marked in Holstein and Ayrshire butter than in Jersey or Guernsey, though the difference is not so great as to make the product seriously defective.

In order to preserve the grain in the finished product to the highest degree, the cream and the product in their course of manufacture should be handled as little as practicable with good work. Right here is a matter of the greatest importance. Whipping of the cream, melting of the same, overchurning, overworking, and working the mass either at too high or too low a temperature—all tend to break down the grain and injure the product by setting upon it a dull, greasy, and adhesive condition.

Creaming with the separator measurably breaks the grain of the resulting product. I am perfectly aware that this statement will not be accepted by all my hearers. But in the product always stands the evidence. From the first separator that was started in this country down to the present time, I have never seen the product from separator cream, or from the butter extractor, that carried a high ideal of grain and solidity. The market has come to accepting it, and experts in judging it are following suit, not that it is the best on these particular points, but because it is such as is offered. Consumers are gradually schooling themselves to accept it as their standard, hence it generally passes inspection at the present time without objection or comment.

COLOR.

The standard of color in butter is derived from the same source as that of flavor, namely, the green grasses of summer. It is when the feed is at its freshest and best that the butter is painted the tint that best suits the consumer. The primal source of the color may not be of importance; yet it has long been a matter of speculation, and is not fully settled. Our grandmothers, as they spanked the golden mass to drive the last possible spray of moisture from its contents, associated the color with the dandelion blossoms of the pasture, while city editors, who never owned a cow or made a pound of butter, writing for the agricultural department of metropolitan papers, are still so green as to recommend corn meal and carrots instead of Wells, Richardson & Co., for winter butter.

It is pretty well established that the native color of butter is derived from the green of the fodder, the chlorophyl of the fodder plants consumed. The greener the herbage on which the cows feed, the higher the color of the butter. Hence green corn from the silo, well preserved, is a far better coloring for the butter than the yellow meal of the city editor. Early-cut hay, with its green color perfectly preserved, gives a passably good color to the product; but it is not possible on winter fodder of any kind to fully maintain the summer standard.

It is claimed by some that the summer's sun has a hand in touching up the tints; but it is altogether probable that the sunshine effect, if any, is on the vegetation rather than the cow.

At the same time, the color varies widely with different cows and with different breeds. Cows vary much in their capacity to carry this coloring matter into the butter product. Hence the differing shades of color with the product from different cows. As a breed, the Guernseys give much the highest color to their milk and butter. Not a few of them give too high a color to their product when running in good pasturage, so much so that in many cases it is seriously objectionable. The Jerseys come next in order, while the other extreme lies between the Ayrshires and Holsteins, with not

much chance for any claim of the one over the other. Just how the cow carries on this work of art is hidden from human knowledge, as is her work of secreting milk.

Consumers demand that butter shall be substantially a uniform shade of color the year around. To meet this requirement, coloring is a necessity. The claim that has been set up by some journals, that coloring butter is a fraud akin to oleomargarine, is as senseless as untrue. No maker colors butter for the fun of it, nor for a fraudulent purpose; but for the plain reason that consumers want it colored, and compel him to do it.

Much butter is colored too high. A deep shade is not called for, does not suit the trade as well, and thus becomes a defect that should scale down the score in judging. No coloring should be so dark as to shade darker or reflect a tint between the prints as they lie cut apart on the tray.

WATER.

Much butter is overloaded with a supply of water. Many creamery men seem to study to load their butter with as much water as they can get it to carry. Such butter is soft, will not keep, will not "spend" well, will not satisfy the consumer. This practice has done much to injure the reputation of the creamery product. There has been a measure of improvement in this regard of late; but there is room for more, and it should come. There is still too much water in much of the butter. It is impracticable to determine the percentage of water in butter by ocular examination, though it is easy enough to detect an excess. A good rule for a maker who wishes to sustain a reputation for his product, is to express all the water practicable. This will leave about ten per cent. in the butter. Such butter, other things being equal, will keep, will spend, will satisfy.

This matter of water in butter is promising to become one of much importance. A party in Boston has been successfully experimenting with a process through which, with a pound of good butter and a pound of sweet milk, he turns out two pounds of butter. When it is noted that milk is eighty-seven per cent. water, the extent of a fraud of this kind becomes apparent. It

has recently been learned that by treating milk with certain ferments the butter fats will emulsify with an abnormal amount of water. A sample of such butter has recently been found to contain nearly fifty per cent. of water. Such a butter is a fraud of the darkest dye. When we consider to what an extent dishonest dairymen and unscrupulous manufacturers might, through such a process, "doctor" their goods, the danger becomes apparent. Such an adulteration is even worse than butterine or oleomargarine. It is quite time for associations like this to take hold of this work and disclose its fraudulent character.

SALT.

The degree of saltness should conform to the demand of the market. Hence no judge should set down any measure of saltness as a defect, unless it is excessive. There is a difference in salt, however; some is too coarse, and leaves crystals in the butter to crunch in eating; some is bitter, and carries that flavor with it whenever used. All such defects impair the quality of the butter in which it is used.

There is much salt, also, damaged by the taking on of foreign and improper flavors from its surroundings while in the store. There seem to be but few, either of dealers or users, that have learned the fact that salt absorbs odors from its surroundings, and as certainly transmits the same to the butter salted with it. Hence, not infrequently, it is found in close contact with the kerosene, the coffee, the onions, and the codfish, while furnishing a comfortable seat for the neighborhood loafers while smoking, chewing, and talking politics. The absorbing of such a mixture makes a flavor that might puzzle an expert to name its source. Not infrequently butter is absolutely spoiled from this source alone. Salt should be as carefully guarded in its purity as the cream itself.

What kind of salt to use? The Higgins has been extensively used, and with general satisfaction; but why use an imported salt when our American salt is as good as there is in the world, and costs no more than the imported? The Diamond Crystal, Genesee, and Worcester brands are each used extensively.

SWEET-CREAM BUTTER.

There has been much said and written of late on sweet-cream butter and the methods and practices involved in its make. Much of this sweet-cream literature has been more amusing than instructive.

In the first place, just why dairy workers and thinkers should be so much concerned with this particular matter, does not clearly appear. There are comparatively few consumers who want this kind of butter; the open market does not call for it, for the reason that there is so little demand; it brings no more in price than other good butter; no more of it can be made from a given quantity of milk, nor is it more easily or cheaply made than standard butter. When the experiment stations of the country first caught onto experimental work with milk and its products, some of the directors in charge, never having had knowledge of the handling of milk and cream, stumbled onto the apparently, to them, surprising fact that butter could be made from sweet cream. Old dairymen had been at work for years making this kind of butter to meet the fancy of a few customers, but the fact had not been made a part of the knowledge of these experimenters. One of these in particular, whose freshness was specially amusing to an old stager in the business, showed himself highly elated that he had actually found customers in Washington who would eat sweet-cream butter and call for more.

Thus has this kind of butter been forced to attention and the people set to thinking, writing, and experimenting with it. Out of the at first limited knowledge of these novices in dairy work we have thus been led to know more of milk and its products. Many conclusions were hastily drawn and too eagerly bulletined, but with a wider experience more conservative ideas are now entertained, and science and practice are now at work hand in hand unravelling the intricate mysteries of the business of dairying.

Sweet-cream butter differs essentially from the ripened cream article. It is softer and finer grained, and more cream-like in its texture. Its flavor is of the purest and sweetest, so far as

brought out, yet is weak, insipid, less pronounced than in the acid-cream butter. A much larger amount of the butter is needed to meet the satisfaction of the taste than of the higher toned article.

I am aware that experimenters with limited experience and less skill in the detection of fine points have not admitted the marked distinction between the two kinds that is here claimed. But trained judges find the difference plainly marked, and the only reason the experimenters do not is because of their limited experience in such work. Cases are recalled where it has been announced that samples of the two kinds were submitted to experts and they failed to detect a distinction. The answer to this would be that the judges to whom it was referred were no experts, or the butter with which it was compared was not high toned in merit.

Sweet-cream butter cannot go into comparison with butter from acid cream. It is *sui generis*, a thing of itself. In competitions it should be placed in a class by itself. The two kinds should no more be allowed to compete together than the Holstein cow and the Jersey, or the English cart-horse and the American trotter.

Gentlemen, my paper is already drawing out to too great a length; yet I am aware that I have not even touched many of the fine points connected with my subject, nor have I attempted to argue those that are still debatable. These I leave for the discussion which may follow. But all the way along, in whatever manner we approach this great subject, the lesson is forced to our attention that *better feed*, *better care*, and *more skilful handling* are the three great powers that in the future are to lift the business of butter making out of the reach of the many damaging associations still confronting it. Fraud, negligence, and incompetency never can keep company with the article of butter that is gilded with the highest quality.

Evening Meeting in Representatives' Hall.

President Connor called to order, and after expressing his gratification at seeing so many present, introduced His Excellency Governor Smith, who spoke as follows:

Mr. President and Members of the Dairymen's Association:

I was invited by our genial secretary of the board of agriculture to be present to-night, and I assure you I am glad to be here, and glad in my official capacity to voice the interest the state has always taken in the important industry of agriculture, and to extend in behalf of the state such greeting as may be proper to the distinguished gentleman from another state, Governor Hoard of Wisconsin, whom it is our good fortune to have with us to-night; and as a citizen I am glad to be here, for in common with all the people of the state, of every trade and profession, I feel a deep interest and appreciation of the importance of the farmer's calling, and especially of that feature or branch of it which we are to consider to-night—the dairy interest. This branch of agriculture is not new, it is as old, nearly, as the human race itself, but was never more important or useful than it is to-day. The milk product is beginning to assume larger proportions in New Hampshire. It is no longer profitable here to raise beef cattle in competition with the western ranch. The dressed beef brought so cheaply and so expeditiously from the stock-yards and cattle-pens of the West has well nigh destroyed this old and once profitable branch of agricultural industry in New England, and so our farmers have very naturally and wisely turned their attention to milk production—to the milk industry.

A large part of the milk supply of New England is from New Hampshire, and the butter and cheese of our dairies have attained a deserved popularity beyond the limits of our own state. Although the industry is an old one, the methods are continually changing and improving. The tendency of the times in all branches of business is towards consolidation and concentration, and also I might say coöperation. The railroads consolidate—the great systems are continually absorbing the smaller lines, and, under proper and wholesome restrictions and limitations, without prejudice to the best interests of the people.

In our great cities the small stores of the past have given place to the mammoth palaces of trade, and again the people have suffered no loss. And so the farmer has recognized this tendency of the times, and the old farm-house churn is succeeded

in great part by the modern creamery, and if the butter of to-day is not molded by the fair hands of the farmer's wife and daughters and loses one distinctive charm, it is still pretty good butter, and the product of the creamery in both butter and cheese commands good prices and a ready sale with quite good margin of profit, at the same time relieving the wife and daughters of much drudgery and toil. I do not intend, however, to make a speech or read you a lecture. I am not a farmer. I know nothing of these things by practical experience, but I do know something of the intelligence and enterprising spirit of New Hampshire farmers. I know you are continually seeking the best methods and appliances. Inventive genius has come to your aid.

Very likely more patents have been applied for and obtained upon farm implements than upon those of any other industry, especially in the machinery of the dairy, and notably the churn. I have in mind a firm once doing business in this very city of Concord, which used to manufacture a patented churn enjoying a wide and well-deserved popularity, and the motto of the firm was, "Get the best." Now I believe that is what you want to do, farmers and dairymen of New Hampshire. Not in churns only, but in all implements and all devices and ideas. Get the best. Adopt the best methods and processes, and you will best succeed and prosper. I have now the great pleasure of presenting to you one who needs no introduction to many of you, Governor Hoard of Wisconsin.

ADDRESS OF EX-GOV. W. D. HOARD OF WISCONSIN.

Mr. President, Ladies and Gentlemen:

I hardly know how to describe to you the mingled emotions of the moment. I stand here in the portrayed presence of men who have made their mark upon the history of my country. I am in the midst of one of the old commonwealths. Everywhere about me I see constant reminders of history. I certainly would be wanting in the instincts and emotions of a patriot if the associations which surround me did not stir within me many and varied emotions. Agriculture was one of the original pursuits in our national life, and it continues to be one of the

important interests. It may appear to you somewhat strange that a resident of a new state having an official life only since 1849 should appear before you and plead the cause of a wider spread of dairy education. But I have only to remind you that education is one of the proudest insignias upon the brow of New Hampshire; that education and the training of the mind and thought and hand in the distinctive work of life that has found welcome in New Hampshire; that as you were in the east, so grew the steps of civilization in the west. The common school of New Hampshire took its pathway in due line west, and now, from here to the Pacific ocean can be found that lowest and yet most important automaton of national life—the country school-district—the lowest representative community of our political existence. But pass Mason and Dixon's line, and we find another order of civilization. And still on and on westward the star of civilization took its way, and reproduced the types that had preceded it east, until it met the Rocky mountains, with no school-district, no educational centre among the common people for the illumination of the common mind, and to that cause, to-day, can philosophically be laid the estrangement and unfortunate scenes of the late Rebellion; for, I remember, with a keenness born of participation in the event, that nowhere on this broad land did the school-house states ever teach treason.

Now the importance of training and education need not be considered; it goes without saying. But there have arisen new exigencies, and great changes have taken place in the order of agricultural life. The dairy interest, my friends, is looming up as one of the most important of our whole national existence. The annual return from the cows, over fifteen millions of them, amounts, to-day, to more than all the banking capital of the Union, so important is it financially. In my own state, for instance, there is invested in dairy work $30,000,000, and the annual revenue to the state of Wisconsin from her cows amounts to $28,000,000. That has been almost entirely accentuated and emphasized by the work of a very few men in that state. Dairy teaching was first organized in 1870 by half a dozen men, who have taken the initiative of all the progress upon their

shoulders from that day to this, who have worked with an eye single to the glory and grandeur of the state, and to the promotion of intelligence along these important lines.

New Hampshire is exceptionally situated. She has a large market at her door; she has the advantage of being able to produce this product, butter and cheese, or its original, milk, at as low cost as any other state in the Union, considering the profit returned. She has the advantage, besides, that if she builds her dairy interest she is building the most enduring of all forms or branches of agriculture known to-day. I emphasize this fact by saying that no other product has maintained as steady a price, there is no other article where consumption has kept ahead of production, to the extent of the dairy interest of this country. There has been the least fluctuation from one year to another for the past twenty-five years of any product known to farmers' labor. Another advantage: If she builds for this interest, she builds for an interest where the result is the product of skill and not of rude labor. It is an important point whether I sell in my product, skill, or whether I sell crude muscle. If we raise wheat and corn for the general market we produce but little more than crude labor.

I saw one time a very clear illustration of the importance of skill. I was on the northern shore of Lake Superior, in the British Possessions, on a fishing trip; and coming down a rapid river, which pitches down a steep decline for forty miles into Lake Superior, I had two Indians, one on the bow and the other in the stern of the canoe. The river runs with marvellous swiftness, estimated at times at almost twenty or twenty-five miles per hour. I sat in the middle of the canoe, gliding noiselessly along, or, dashing over the brow of a hill, the river precipitated itself with arrowy swiftness, and a tremendous rock loomed in the midst of the river, and I saw the canoe approaching it with a velocity that did not assuage my anxiety. I turned to look in the faces of my guides, and I could not read my fate there; they were silent and impassive, and I was about to commend my soul to my Maker, when, just as it seemed that the bow would dash against the rock, with a very deft and skilful turn of the paddle we shot by it, and repeated this experi-

ence for forty miles. I said to myself, "I will never put on airs again about being an educated man." The aboriginal skill of those men had preserved me from death; and I had rather have had those two Indians in that canoe than all the politicians in the United States. It was skill I wanted; there was not a pound of strength to be exercised.

To initiate skilled dairy methods, education is necessary, agitation is necessary. We may have the finest cream in the world, but unless we churn it—agitate it—we never can get any butter. Likewise, the promotion and progress of this knowledge is dependent largely on agitation.

Let me say what I said a moment ago, that dairy farming, dairy husbandry, rests upon the most enduring basis of any form of agriculture. Now, almost universally, I hear this cry come up, even from the state of Washington, where I was last summer; and here I am to-day in New Hampshire, the same cry coming up; men asking here on the streets, to-day, "Don't you think this business is going to be overdone? Do you think it is safe to trust the dairy business, to trust to the encouragement of it and to lead the farmer into it? Do you think it is safe? Isn't it going to be overdone?" It is a very practical thought. Let me answer it in this way: If every man in New Hampshire to-morrow morning resolved to build a creamery or a cheese factory, it would not add one single drop to the milk product; it would not add one pound of butter. It takes a cow to make milk, and the product of this industry is all dependent on the increase of this marvellous and mysterious mother we call the cow. Now what is the state of the increase in that particular? Wonderfully less than the increase of the consumption of our population. In Wisconsin, where the business has been encouraged by every means possible, the increase of cows is less than five and one-half per cent. yearly. We have here a little bit of calculation which will enable us to see that the encouragement of this industry is not likely to meet with the depressions in price which attend pork raising, or corn raising, or may attend beef raising. Then, again, it cannot be profitably carried on in large operations, like wheat raising in Northern Dakota. It is impossible to make fine butter except by the

expenditure of time, care, and skill. There is no profit in poor butter. There never has been any over-production in the butter market, except in poor butter.

Dairy education is needed. There is need of organized knowledge as well as organized effort. Now the fashion of late years has been, as the governor very clearly asserted, towards organization or coöperative effort. I understand that in your state there has been in the past ten years an increase of over fifty creameries. Now that is organized effort. But it is not true that there has been organized knowledge to go along with this organized effort. In too frequent instances the farmers themselves have been led to enter the dairy business without a study of its economies. As a consequence, to-day, the cows of New Hampshire, numbering, I think, somewhere in the neighborhood of one hundred and twenty thousand, are not producing one half of the amount they should produce in order to make a profit from them. Now a certain amount of dairy expense attends the production of this product. It costs just as much money to house a poor cow as a good one; it costs just as much money to attend to her; it costs just as much money to give her food; the cost of support is equal with the cow that gives seventy-five pounds of butter and the one that produces three hundred and fifty pounds; the support of animal life is the same in one case as in the other; it costs just as much to provide the pasturage.

Prejudice steps in a great many times and blinds men's minds. I find that in these older communities more than I do in the West. I find men more ready to-day, in Wisconsin, to be teachable in spirit, serving the Lord, than I do in New Hampshire. I find in New Hampshire, Vermont, and New York, to-day, a large number of farmers using old, worn-out methods and charging their failure to worn-out soil. I am reminded of that saying by the Great Teacher, "Except ye become as little children ye can in no wise enter the kingdom of heaven," and he might have added, the kingdom of successful dairying also, and the kingdom of science, and the kingdom of human progress everywhere. The first great step in dairy education is to do away with the conceptions of prejudice.

Without a study of the question of finer economies it is impossible, to-day, to conduct a dairy profitably. The first question with you and me in the handling of a cow is the reduction of expense, the reduction of the cost of production. You and I cannot affect the price but very little; that is at the farther end of the line; that we do n't control; but our end of the line we do, and in that lies the finer economies of the business—reducing the cost of production. How do we reduce it? First, we improve the cattle; the cow is the basis of this business; we improve the cow; we breed the cow for a special purpose. We have had a great deal of this general purpose nonsense to contend with; we have had men all over the United States who believed that it was for their best interest to handle a cow that was of general purpose character, without any particular purpose in her existence. My friends, that has cost the people of the United States—the farmers, the dairymen of the United States—millions of dollars. The trotting-horse men are not of that character. You cannot find a trotting-horse man to-day in the United States who believes in a general purpose trotting-horse, you cannot find a breeder of dogs who believes in a general purpose dog; you cannot find anywhere in the world any class of men who are engaged in any special breeding who believe, as do the dairymen, so many of them in this country, on this matter. Now that we are embarked in this business, we need all the ability and capacity that a specifically bred cow can give us; we need to reduce the cost of production; then we need, in addition, all the intelligence we can acquire by thought, reading, and study, to aid us in the reduction of the cost of the work. We need it upon the farm; we need it in the economies of the farm; we need it in the production of food. You pay out millions of dollars to the cotton-seed man of the South, or the linseed man of the West, and yet there has been scarcely any adequate thought expended by the farmers of New Hampshire towards reducing this cost by supplying the food from their own farms.

Silos, to-day, I am surprised to find, exist in larger numbers in Wisconsin than in New Hampshire. In my own town there are sixty; in the town adjoining there are seventy-five; and yet we produce food cheaper in Wisconsin than it is produced here.

The silo which would enable New Hampshire, to-day, to quadruple the number of her cows, and do it in a very short time, if her farmers took it up and studied it, is scarcely understood or practised. In the state of Wisconsin there are between six and seven thousand silos. Now what has brought that about? The agitation of the question in the farmers' institutes, in the dairy papers, and the constant questioning and answering along these lines. One old German in the adjoining town, by the name of August Schutz, when asked why he put a silo in—and he has one holding eight hundred tons—said, in his quaint German way, —"Vell, pefore I have a silo my cows never shed their hair undil they come out, and the hair blow avay, and the neighbors, they alvays got dat hair; but since I put in the silo the hair start in the barn, and I save all that hair." There was a deep and profound lesson conveyed in that simple form—that was the increased thriftiness of his animals. But he did not tell the whole story; it was at very much less cost. Therefore I say we need to study constantly the reduction of expenses, the reduction of the cost of production.

I desire to make this little talk intensely practical. It is of no use for me to indulge in figures of speech; I should be constructive in my thought. As I said, we cannot control the price much at the further end, but by studying to decrease the cost of production we may increase the profits very greatly. Rapid progress in new methods calls for increased study and education.

My friends, the business of making butter is scarcely recognizable in the old-time standards; new methods are constantly springing to the front; we are subjecting the cow and her product to the intelligence and discernment born of new methods; as a consequence, those communities in which dairy agitation and dairy education have not been prevalent, are in the background. Take, for instance, the Babcock test, which only two years ago revolutionized the dairy world, and gave us new methods for determining the values of milk. I have, to-day, three hundred and sixty patrons in five creameries, and I handle for those men $335,000 of their money every year, and every penny of that is divided to those men by the Babcock test. The milk

is brought to the creamery, and is there made up; we are their hired men, my sons and myself, and we work for them at a specific wage—we are wage-earners. That milk is subjected to this test, and every man receives according to the value of the butter-fat, and the skim milk is returned to the patron. This has completely revolutionized the whole system of coöperative dairying, and it is spreading into the cheese-factory business.

The past two weeks I have been in Canada, and I have seen there what a wonderful interest they are taking in this matter. They realize the importance of the dairy interest, and they are spending money with lavish hand, in order that the Canadian dairyman shall be given every opportunity for an intelligent understanding of this question.

I could cite to you numerous examples of difference in the reward of labor. I will only give you an instance from my home creamery. I have here the report for one year. For instance, I will call your attention to two men,—Major G. W. Burchard received, the past year, on all the milk that his cows furnished the creamery, $1.25 per hundred pounds, net. Just below him is another man, Thomas Spry, who received eighty-eight cents. Now what is the difference between these two men? The same sky is above them, and the same earth is beneath them. Spry's butter sold for identically the same price as Major Burchard's. What constitutes the difference between eighty-eight cents as the reward of one man's labor and $1.25 as the reward of another? The difference lies in the brain, in the judgment, in the education, in the thought of the two men. Mr. Spry is a hard-headed old Englishman, who said to me one day,—"What are you talking about? I tell you a cow is a cow, and that is all you can make of it." "Well," I said, "my friend, can you not see that these cows of Burchard's are vastly ahead of yours? Can you not see that here is something that is working a difference?" And the old man could see nothing of the kind.

Now I will give you a little illustration to show you the difference between education in one town, and the lack of it in another. In 1885, the town in which I resided produced 126,000 pounds of butter. It has been the centre of agitation and study, of a great deal of discussion among the farmers as to the

economies of the work. The average price received for that butter was twenty-one cents per pound in that year. Twelve miles from there is the town of Watertown. The town of Watertown produced that year eighty-three thousand pounds of butter, for which it received an average of twelve cents and eight mills per pound. This was in the same county, towns only twelve miles apart. What caused the difference? The town of Watertown is settled almost solidly by German farmers, who, by virtue of the fact that they did not read or speak English to any extent, were shut out from the avenues of agitation and education on this question, and they did not believe it was essential to them to make a study of this business. As a consequence they submitted to a loss on the butter which they did produce that year, of $7,280. Those men, by not giving themselves to this study, submitted to a tax of $3.71 for every man, woman, and child in that community. I am not speaking of the butter they might have produced, but of the butter they did produce. Now that was a waste of human effort and opportunity, and at the bottom of it was nothing else than the want of agitation and education of the people. One set of farmers believed that it was necessary to make a study of their business, and the other set of farmers were indifferent.

These examples could be multiplied all over the country. They could be shown in New Hampshire. I am conversant with a number of examples I know of in your own state, where farmers kept the same number of cows, but one received nearly double the reward of the other, the difference, every time, being the state of intelligence of the two men.

Dairy education should be classified as being of two kinds, that which belongs to the farmer himself and his own effort, and that which devolves upon the state. It is my candid opinion that one of the reasons, to-day, for the wonderful prosperity and progress in Wisconsin is due to the fact that, way back about twelve or fifteen years ago, the state itself saw that it had a duty to perform in this particular. It made an appropriation of $2,000 per year to the State Dairymen's Association, and said to them, "There is the money; take it, and do everything in your power to promote dairy intelligence within these borders." The

money was taken; state conventions were held in one section and another. I organized the association in 1872, and from that time till this, it has made a most wonderful progress in this line. The state, in addition, took upon itself the expense of publishing the annual reports of the conventions, and money has been given for instruction. To-day we are employing from four to six instructors, who visit different cheese-factories and creameries, and who do all in their power to promote, raise, and enhance the standard of Wisconsin dairy product. Do you ask what are the practical results of this? My friends, I wish I could take you, to-day, and show you just what the agricultural prosperity is, in many sections of that state. Remember that nearly two thirds of the whole territory of Wisconsin has been denied to agriculture until very recently, being covered with a dense forest, being farmed only for its pineries. Fully two thirds of the state has been devoted to lumbering operations, and only about one third has been devoted to agriculture. During my official career as governor of the state, the banks of Sheboygan county reported to me that there were on deposit in that county a million and a half of dollars belonging to the dairy farmers of that county alone. That represented the surplus cash of the dairy farmers of that county, saying nothing of other property—investment in cows, in lands, buildings, and all that belongs to the business. In my own county of Jefferson there is deposited, to-day, about $1,400,000 belonging to the dairy farmers of the county, and all of it directly traceable to the cow. The price of real estate has been enhanced, and constantly is being enhanced, until to-day the average price of real estate in my county is over fifty dollars per acre. And this is all due to the change in agriculture and the agitation of the minds of the farmers in these lines.

In 1872, when this agitation commenced, the land of my county had been so depleted in the insensate and foolish wheat culture that the production of wheat had gone down to eight bushels per acre, and the mortgage indebtedness of the farmers was nearly sixty per cent. of the assessed valuation of the county. To-day, my friends, under the domination of a more intelligent and thrifty and rewardful agriculture, the situation is as I gave it to you, and the mortgage indebtedness of that county

is not seven per cent. of its assessed valuation. Now this has come by the intelligent promotion of the forces of society along these lines.

I want to see this whole country taking hold of agriculture, and promoting it according to its dignity. I want to see the forces of society everywhere believe that it is as much for the interest of the state to educate fine farmers as it is fine lawyers or fine doctors. I want to see the forces of society doing what they can to promote and establish and finish an intelligent, intellectual farmer. The great mischief with the farmer of the United States has been that he has had no respect for himself, for his calling. If a parent to-day, in New Hampshire, has three boys, and proposes to direct and further their future (as every parent does, more or less), he will say to them,—"Tom, I will make a lawyer of you; Bill, I will make a doctor of you; John, I will make a farmer of you."

Now what is the current of that man's thought? How does he prepare those boys? He sends the boy that is going to be a lawyer away to school,—and he is wise; and he says to that boy,—"You must study books; you must discern in them the principles of your trade; you must understand how, by mental process, to deduct a principle from the printed page, and then turn and put it into practical use as a lawyer." And he turns to the doctor, and he says,—"You must have an intellectual development along the same line. You must discern the principle on the printed page, and learn how to apply it in your business as a doctor." But what does he say to the farmer boy? Does he say to him,—"John, you must have just as wide learning, and as strong an intellect, for your business, as the others; you must look into books; you must discern their principles, and go out into the fields, the barns, the flocks and herds, and put those principles into execution?" Nothing of the kind. The farmer himself does not believe that there must be intellectual development before his business can become successful. He believes that all the rewards come through the hard hand, and not the wise head. Now, my friends, it is not a very great trick to be a banker or a lawyer. The Lord knows, if you look them over, mediocrity is as apparent there as anywhere else, only there are

not as many of them. A man who is a banker deals with rules and laws and principles of man's devisement. A man who is a lawyer deals with principles and rules of man's devisement. But the man who is a farmer deals with laws of God's devisement; and does n't it need a bigger man to interpret God than it does man?

I am ashamed; I am disgusted at the low estimate which the farmers of the United States have been constantly putting on their own vocation. I am ashamed that they have not stood up as they ought to have stood and demanded for the farmer as broad, as liberal a culture in the line of his work as is granted to everybody else. Dairying *per se* is an intellectual business. Here is this cow, the foundation of this business, she is the most wonderful mystery that confronts man's intelligence, and in her are represented all the wonderful mysteries of maternity. Can any man who is low in the order of his intellect, or thought, or purpose, unlock these mysteries and bring them to his profit? No. He who would essay this wonderful work must be a man of trained thought, of trained perception, and trained intellect. As a consequence, those who are producing the butter and cheese of the country, and handling the cows of the country, need, Heaven only knows how they need, a wider and better diffusion of knowledge, a wider and better education. I appeal to you, then, as New Hampshire men, that you do what you can, by all the forces of society, by legislation, by agitation, by counsel, by example everywhere, to bring up the prosperity of New Hampshire agriculture; and to do it you have only to instill and infuse a broader and better enthusiasm for broader and better knowledge.

I thank you, ladies and gentlemen, for the very kind attention you have given me.

HANDLING AND MARKETING DAIRY PRODUCTS.

BY W. W. COOKE, BURLINGTON, VT.

As a rule, farmers are better manufacturers of their product than they are salesmen. At the present time, a farmer, to be successful, needs not only to know how to make a good product,

but his ultimate success depends largely on his ability to get the most out of that product after it is ready for the market. Comparatively few farmers are so situated that they can market their product to the best advantage, and for by far the larger number it will be most advantageous to unite with their neighbors, or to attach themselves to some corporation, so that their product will be marketed in connection with a large quantity of similar products. The general market demands both a uniform supply and a uniform product. The day is past when a farmer can make butter five months in the year, then cease being a manufacturer for seven months, and when he takes up the business again for the next year, find his customers ready and anxious to be again supplied. He will find that during the seven months of his idleness some other man has stepped in and taken the trade away from him.

Consumers are, more and more, demanding a product fresh from the churn every week in the year; and he will hold the market best, and get the best returns, who can satisfy this demand. The creamery has a large advantage over the private dairyman on account of the large quantity of its product, and for the further reason that the product being in such quantity they can afford to hire a man to personally oversee it. As a consequence, the product is both of a high quality, and, what is still more important, of a *uniform* quality. Retail dealers, hotels, restaurants, and other large consumers will much prefer to trade where they can get a large supply of one uniform quality and get that same quality every week in the year. New England farmers need especially to turn their attention more to winter dairying—to marketing their product as much as possible between October and May. It is complained that to do this requires a heavy feeding of grain. It is true, no winter dairy can be run without grain; but if one will figure on the matter, he will find that the difference in cost is not large between wintering a cow on a maintenance ration to keep her alive, with no return, and giving her a full ration that will return a still fuller profit.

The second part of our subject, the handling of the product, is of special importance at this time. The dairy interests of New England are going through a period of change. Only a

few years ago but one system of handling milk was known (warm, shallow setting) and a good deal more than half of the milk of New England is still handled by this system. Just at present there has come a new system called the "separator system," which is making very strong claims and is fast superseding all other systems. There is no doubt that in the future, and in the very near future, this system will be the leading one. It behooves us, then, to consider whether or not the farmer is obtaining any advantage through the introduction of this new method of handling milk.

As to the effect of the separator on the quality of the butter, there is quite a difference of opinion. It may be well enough for us to remember that there is no absolute standard by which to judge a butter as to any of its characteristics. The standard is a purely arbitrary one, governed entirely by the taste of the customers. Perfect butter is that butter which most perfectly suits the taste of the consumer and brings from him the largest retail price. It follows, then, that what one man would consider perfect butter and pay a high price for, another would not take as a gift. The butter maker must, therefore, be governed in his operations entirely by the market to which his product is to be sent, and be able to make butter to get the most dollars out of it. The general market has said by its dealings during the past few years that it has no objections to separator butter; on the average, a higher price is paid for it, week in and week out, than that paid for butter by any other system. The farmer, then, can rest assured that if he will make the best butter that can be made with the separator he need have no fear of not obtaining a good price for it.

The farmer also wishes to make as much butter as possible. There is no question but that more butter can be made by the use of the separator than by any other known method. This is conceded on all hands, and the mass of figures to prove it is already large and rapidly increasing. It is true that many have failed to make good butter when they first began using the separator. A general failing has been in not cooling the cream sufficiently after it was taken from the machine before it was set to ripen. The cooler the cream is made at this time, the better

and more solid will the resulting butter be. It should be cooled at least to fifty-six degrees, and it ought to be cooled to fifty degrees.

What is the exact effect of the separator on the milk? It is difficult to say how the whirling of the milk in the separator can have any effect on the globules of the milk. The globules are so small that it would take quite a number put in a line to reach across the edge of the blade of the sharpest razor, and as they come out through the slot in the separator they are as free to move without crowding as a minnow in the middle of Lake Champlain. The separator does take out some fibrin from the milk, and consequently ought to make the churning a little easier.

A great deal is being said in these days as to whether cream should be churned sweet or sour. At the Vermont Experiment Station the cream in the ordinary routine is all churned sweet. It would be difficult to get up an easier system of handling the milk than that in use there. The De Laval "Baby" No. 2 separator is used, which is started night and morning, as soon as three or four pails of milk are ready. The separating will then be completed within ten minutes after the last cow is milked. Twelve minutes more is sufficient to take out the separator bowl, clean it, wash it, scald it, and have it ready for the next run. The cream is run quite thick, so as to be in small bulk, and is submerged in a Cooley can in a tank of ice water. The same is done with the succeeding three milkings. As soon as the cream from the fourth milking, which is always the morning milking, has gotten thoroughly cooled, all four cans of cream are poured into the churn, without having been tempered or mixed, or any fussing whatever having been done with it since it was separated. The churn is started at once, no matter what the temperature is, although under these conditions the temperature will always be under 50°, and will usually be from 43° to 45°. The butter comes in the best of granular form after about forty-five minutes' churning, during which time the cream has warmed up to about 52° to 54°. By this method we save all ripening of the cream, with its great liabilities of injury, we save expense of a cream-ripening vat,

and especially the great difficulty of keeping the cream at the proper ripening temperature.

Two questions will at once be asked: "Can this butter be sold at a fair price?" and "Will it keep?" We can answer the first question satisfactorily, so far as our own particular customers are concerned; they like it better than butter from sour cream. But it is a fact that the general market is not yet ready for sweet-cream butter, nor would we advise any private dairyman or creamery to start into the making of sweet-cream butter until they have assured themselves, by trial on a small scale, that their customers have been educated up to it. There can scarcely be any question that within a very few years the best paying trade will demand sweet-cream butter; but until that demand comes dairymen had better stick to the ripening of their cream.

The question as to the keeping qualities of sweet-cream butter is easily answered. It will keep just as well and just as long as any butter ought to keep. The market at the present time pays the highest price for a butter that will not keep; that is, for a butter that has not been worked solidly enough so as to keep. Almost any well-made butter will keep well if it is well worked and then packed solidly in a large mass and kept under fairly good conditions. The same butter, with half the working, put up in prints and stored in the ordinary housewife's refrigerator, will lose its best flavor inside of a week. These remarks apply to both the sweet-cream and sour-cream butter. There are probably but few butter judges in the United States expert enough to tell on a given sample of butter, ten days old, whether it was made from sweet cream or sour cream. The sweet-cream butter in the tub undergoes the same changes that the sour-cream butter did in the ripening-vat, and at the end of a few days has become, to all intents and purposes, sour-cream butter. There has been a noticeable increase this past winter in the amount of sweet-cream butter sold on the market, and it has also this year, for about the first time, taken quite a number of prizes, in competition with sour-cream butter, when the judges did not know the method of manufacture.

One other point in the handling of butter is worth mention,

and that is the amount of salt to be used. Dairymen should take as their rule the use of just as little salt as their customers will allow. The less salt there is in the butter, the more butter will be used, and the larger will become the demand for butter, and the better the price. If the people in this country could be induced to use butter without salt, it would take from a third to a half as much again to supply the demand. Dairymen need not be afraid that by putting in this small amount of salt they will thereby decrease the weight of butter ready for market. The salt that is added to butter merely takes the place of so much water, the amount of fat in each hundred pounds of lightly or heavily salted butter being very closely the same.

What has been said may be summed up into the following advice: Use the separator as much as possible; use it at home, if necessary, but, if possible, join forces with your neighbors and run a creamery; ripen your cream as little as your customers will stand; put in as little salt as the customers will allow; make as much butter in the winter as possible, and sell to private customers, or, still better, through the creamery, in large quantity.

NEW HAMPSHIRE STATE GRANGE.

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NEW HAMPSHIRE STATE GRANGE.

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2	Eastern, N. H.	Strafford	H. A. Hill, Master. James M. Hayes, Lecturer. Charles F. Foss, Secretary.
3	Merrimack County	Concord	John C. Morrison, Master. H. H. Metcalf, Lecturer. Mrs. C. F. Emery, Secretary.
4	Belknap County	Laconia	T. O. Taylor, Master. F. D. Gilman, Lecturer. Mrs. Ellen M. Hunt, Secretary.
5	Northern, N. H.	Littleton	Bert A. Taylor, Master. Mrs. Nellie Aldrich, Lecturer. George E. Walker, Secretary.
6	Cheshire County	Keene	Andrew J. Williams, Master. Mrs. Jane E. Powers, Lecturer. Mrs. Ella J. Farwell, Secretary.
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9	Sullivan County	Newport	Bela Graves, Master. George P. Dickey, Lecturer. Mrs. R. E. Purrington, Secretary.
10	West Rockingham	Hampstead	Henry C. Sanborn, Master. Charles H. Day, Lecturer. Charles H. Brown, Secretary.
11	East Rockingham	Exeter	Hesikiah Scammon, Master. Miss Mary O. Caverly, Lecturer. Charles Flanders, Secretary.
12	Suncook Valley	Pembroke	Charles R. Rogers, Master. Martin H. Cochrane, Lecturer. Miss Fronie G. Russ, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS, 1893.

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4	Merrimack River	Canterbury	Mrs. Caroline F. Emery, Master. Mrs. Jennie Mason, Lecturer. Miss Kate E. Gleason, Secretary.
5	Lovell	Washington	Will D. Brockway, Master. Mrs. Carrie B. Ball, Lecturer. Miss Ida M. Brockway, Secretary.
7	Granite	Milford	William R. Howard, Master. Mrs. Lizzie R. Howard, Lecturer. George W. Colburn, Secretary.
8	Sullivan	Newport	Bela Hurd, Master. Mrs. Mattie J. Gilman, Lecturer. George W. Hurd, Secretary.
9	Claremont	Claremont	O. D. Blanchard, Master. Mrs. Lizzie Lull, Lecturer. Mrs. Kate F. Densmore, Secretary.
10	Souhegan	Amherst	Clarence L. Trow, Master. Miss Cordelia Melendy, Lecturer. Fred E. Cooley, Secretary.
11	Hudson	Hudson	Kimball Webster, Master. George H. Abbott, Lecturer. Miss Gertie A. Merrill, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
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13	Nashua	Nashua	Stephen L. G. French, Master. Mrs. Mabel A. Bailey, Lecturer. Miss J. A. Huntington, Secretary.
18	Pinnacle	Lyndeborough	William T. Bowen, Master. S. Kate Swinnington, Lecturer. John H. Goodrich, Secretary.
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21	Prospect	Mont Vernon	John Thorpe, Master. Mrs. Wm. H. Stinson, Lecturer. Mrs. J. Frank Perham, Secretary.
23	Greenfield	Greenfield	John T. Robertson, Master. N. T. Chever, Lecturer. Mrs. Geo. D. Gould, Secretary.
25	Cornish	Cornish	James W. Fitch, Master. Iran C. Weld, Lecturer. Mrs. Almina C. Fitch, Secretary.
31	Thornton	Merrimack	Anson A. Platts, Master. Miss Annie M. Blood, Lecturer. Miss Edith E. Read, Secretary.
32	Oak Hill	Francestown	Henry Richardson, Master. Mrs. Nell E. Patch, Lecturer. E. H. Patch, Secretary.
33	John Hancock	Hancock	Milan E. Davis, Master. Henry F. Robinson, Lecturer. Miss Ella C. Ware, Secretary.
34	Miller	Temple	Mrs. Nettie C. Hadley, Master. Mrs. A. L. Rockwood, Lecturer. Mrs. B. W. Bragdon, Secretary.
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36	Watatic	New Ipswich	Charles L. Robins, Master. Francis W. Prichard, Lecturer. Charles A. Preston, Secretary.
37	Nutfield	Derry	Orson S. Bartlett, Master. Horace A. Hill, Lecturer. Mrs. Horace A. Hill, Secretary.
39	Bear Hill	Henniker	Joseph Wood, Master. George S. Wiggin, Lecturer. Mrs. C. A. Wilkins, Secretary.
40	Uncanoonuc	Goffstown	Isaac J. Paige, Master. George H. Whipple, Lecturer. Fred K. Hazen, Secretary.
41	Wolf Hill	Deering	Andrew J. Locke, Master. Mrs. C. E. Elsworth, Lecturer. Mrs. Lizzie G. Locke, Secretary.
42	Stark	Dunbarton	Philander M. Lord, Master. Mrs. Sarah M. Lord, Lecturer. Mrs. S. W. Caldwell, Secretary.
44	Londonderry	Londonderry	C. G. Pillsbury, Master. Alice E. Miller, Lecturer. H. J. Caldwell, Secretary.
46	Naragansett	Bedford	Orra G. Kilton, Master. Albert L. Flint, Lecturer. E. W. Stevens, Secretary.
47	Warren Pond	Alstead	Frank M. Forristall, Master. Mary Alden, Lecturer. Thomas Miller, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
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49	Monroe	Monroe	Seth W. Miner, Master. W. I. Fisher, Lecturer. R. A. Moore, Secretary.
50	White Mountain	Littleton	John W. Farr, Master. Mrs. Eliza Clark, Lecturer. George E. Walker, Secretary.
51	Winnipesaukee	Meredith	Orville P. Smith, Master. Charles H. Ward, Lecturer. G. F. Smith, Secretary.
52	Mount Belknap	Gilford	Martin M. Cole, Master. Thomas E. Hunt, Lecturer. Harvey A. Jewett, Secretary.
53	Joe English	New Boston	Harry H. J. Reed, Master. Charles S. Colburn, Lecturer. Miss Cora L. Fiske, Secretary.
54	Wyoming	South Weare	Eben L. Paige, Master. Mrs. Mabel Eastman, Lecturer. Mrs. E. W. Nichols, Secretary.
55	Ammonoosuc	Swiftwater	Bartlett B. Gale, Master. Ezra A. Rodimon, Lecturer. Bertha M. Gale, Secretary.
56	Union	Hopkinton	Charles H. Connor, Master. Mrs. George E. Foss, Lecturer. Mrs. C. S. Connor, Secretary.
58	Bradford	Bradford	F. O. Melvin, Master. A. P. Howe, Lecturer. Mrs. H. W. Felch, Secretary.
60	Grafton Star	Hanover	J. M. Fuller, Master. C. E. Hewitt, Lecturer. C. P. Brown, Secretary.
62	Morning Star	Lyme	J. F. Elliott, Master. Mrs. Geo. P. Amsden, Lecturer. George S. Mayo, Secretary.
63	Valley	Hillsborough	O. B. Huntley, Master. Mrs. Angie I. Marcy, Lecturer. Mark M. Hadley, Secretary.
65	Crown Point	Strafford Corner	Stephen B. Jenness, Master. Fred T. Stanton, Lecturer. Charles F. Foss, Secretary.
68	Mascoma	West Canaan	Herbert L. Webster, Master. Mrs. Julia A. Dwinels, Lecturer. Mrs. Ruth K. Jones, Secretary.
69	Eureka	Grafton	George S. Barney, Master. Mrs. Mary H. Mills, Lecturer. B. Franklin Williams, Secretary.
70	Mont Calm	Enfield	Charles McDaniel, Master. Amanda McDaniel, Lecturer. Amos M. Bryant, Secretary.
71	Blazing Star	Danbury	Albion W. Braley, Master. Mrs. H. E. Huntoon, Lecturer. Miss Laura E. Peters, Secretary.
72	Indian River	Canaan	C. O. Barney, Master. Mrs. R. I. Rainney, Lecturer. A. M. Shackford, Secretary.
74	Deerfield	Deerfield	Roscoe D. Rand, Master. Miss C. E. Dearborn, Lecturer. Arthur M. Chase, Secretary.
79	Olive Branch	Hebron	H. S. Crafts, Master. George B. Barnard, Lecturer. H. M. Worthley, Secretary.
80	Bow Lake	Strafford	C. F. Waterhouse, Master. Miss Minerva R. Perry, Lecturer. H. S. Hill, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
81	Cocheco	Dover	Spencer S. Sherman, Master. Lucinda P. Wentworth, Lecturer. James M. Hayes, Secretary.
83	Spafford	West Chesterfield.	Norman G. Colburn, Master. Miss Emma L. Snow, Lecturer. Herman G. Smith, Secretary.
86	Rochester	Rochester	Alvah E. Otis, Master. Mrs. L. K. H. Sanborn, Lecturer. George A. Sanborn, Secretary.
87	Kearsarge	Wilmot	Wesley J. Cilley, Master. Mrs. N. A. Pillsbury, Lecturer. Fred E. Longley, Secretary.
88	Highland Lake	East Andover	Frank W. Durgin, Master. Mrs. E. C. Flanders, Lecturer. Mrs. N. M. Peveare, Secretary.
90	Warner	Warner	Henry R. Tewksbury, Master. Mrs. Julia W. Heath, Lecturer. Mrs. M. F. Dunbar, Secretary.
91	Sutton	Sutton	William H. Chadwick, Master. Mrs. Carrie E. Johnson, Lecturer. D. L. Powers, Secretary.
93	Campton	Campton	Thomas S. Pulsifer, Master. Mrs. E. M. Bartlett, Lecturer. Mrs. A. H. Merrill, Secretary.
94	Ezekiel Webster	Boscawen	J. Edwin Colby, Master. Miss Alice Hardy, Lecturer. Miss Minnie Morrison, Secretary.
95	New London	New London	E. F. Sargent, Master. Jennie B. Messer, Lecturer. Frank M. Stanley, Secretary.
96	Forest	Stoddard	Benjamin H. Griffiths, Master. Mrs. Abbie O. Chase, Lecturer. Miss Ida M. Chapin, Secretary.
97	Catamount	Pittsfield	John T. Harvey, Master. Mrs. Ida Cram, Lecturer. Miss Jennie S. Cowie, Secretary.
98	Antrim	Antrim	William A. Holt, Master. Ira Hutchinson, Lecturer. Miss L. Hutchinson, Secretary.
99	Harmony	Sanbornton	F. D. Gilman, Master. G. C. Ward, Lecturer. T. O. Taylor, Secretary.
100	Daniel Webster	Webster	Daniel G. Holmes, Master. Mrs. Alice Walker, Lecturer. Mrs. Lizzie S. Call, Secretary.
101	Crystal Lake	Gilmanton	Elbridge G. Clough, Master. John L. Piper, Lecturer. Luther E. Page, Secretary.
102	McClary	Epsom	Samuel R. Yeaton, Master. Mrs. J. W. Fowler, Lecturer. Mrs. B. H. Fowler, Secretary.
103	Monadnock	Dublin	Fred A. Pierce, Master. Frank P. Fiske, Lecturer. Miss S. F. Townsend, Secretary.
104	Bartlett	Salisbury	Stephen B. Sweatt, Master. Thomas D. Little, Lecturer. John W. Folsom, Secretary.
105	Silver Lake	Harrisville	Bernard F. Bemis, Master. Fred C. Farwell, Lecturer. Mrs. Mary E. Parker, Secretary.
106	Fruitdale	Mason	Albert B. Eaton, Master. J. A. Morse, Lecturer. Mrs. Ella M. Wilson, Secretary.
107	Pemigewasset	Hill	Joseph W. Favor, Master. Leon Blake, Lecturer. F. R. Woodward, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
108	Franklin	Franklin	Jerry G. Clark, Master. Mrs. Jerry G. Clark, Lecturer. Miss Alice M. Colby, Secretary.
109	Rumford	East Concord	Fred S. Farnum, Master. William A. Cowley, Lecturer. Effie M. Curtis, Secretary.
110	Friendship	Northfield	Arthur H. Hill, Master. Edwin D. Forrest, Lecturer. Lucien F. Batchelder, Secretary.
111	Pembroke	Pembroke	Mrs. Sarah F. Dearborn, Master. Miss Fronie G. Russ, Lecturer. Mrs. S. F. Blanchard, Secretary.
112	Sunapee Lake	Newbury	John D. Folsom, Master. Mrs. L. D. Gillingham, Lecturer. Willis E. Muzzey, Secretary.
113	Capital	Concord	William E. Standish, Master. Albert A. Saltmarsh, Lecturer. Miss Lizzie F. Stokes, Secretary.
114	Golden Rod	Swanzey	Harry W. Banks, Master. Mrs. H. E. Freeman, Lecturer. C. H. Rockwood, Secretary.
115	Granite Lake	Nelson	Cummings B. McClure, Master. Mrs. Susie A. McClure, Lecturer. Veranes C. Atwood, Secretary.
116	Mount Washington.	Whitefield	Fred A. Shute, Master. Mrs. C. E. King, Lecturer. G. W. Shattuck, Secretary.
117	Lawrence	Belmont	James G. Bryer, Master. Horace C. Woodward, Lecturer. Mrs. H. A. Lamprey, Secretary.
118	Marlborough	Marlborough	Charles L. Clark, Master. Miss Adele T. Peck, Lecturer. Almon C. Mason, Secretary.
119	Barnstead	Centre Barnstead.	Josey L. Davis, Master. Charles F. Davis, Lecturer. Mrs. C. M. Downs, Secretary.
120	Laconia	Laconia	John H. Robinson, Master. Mrs. G. W. Thompson, Lecturer. Miss Annie E. Hadley, Secretary.
121	Loudon Surprise	Loudon	Alfred P. Batchelder, Master. George W. Rowell, Lecturer. Mrs. C. A. Mudgett, Secretary.
122	Scammell	Durham	Charles A. Smart, Master. George D. Stevens, Lecturer. Mary A. Burnham, Secretary.
123	New Hampton.	New Hampton	William Wallace, Master. Lizzie A. Dyer, Lecturer. Charles Q. Gordon, Secretary.
124	Star King	Jefferson	Irving Applebee, Master. Mrs. M. F. Applebee, Lecturer. James G. Summers, Secretary.
125	Walpole	Walpole	Charles H. Barnes, Master. Miss M. E. Lovering, Lecturer. Miss Eva M. Guild, Secretary.
126	Lebanon	Lebanon	M. M. Lane, Master. Charles S. Ford, Lecturer. Mrs. E. C. Kinne, Secretary.
127	Massabesic	Auburn	Sylvester E. Emery, Master. Miss Lettie M. Wood, Lecturer. Alfred D. Emery, Secretary.
128	Lake Shore	Wolfeborough	George F. Horn, Master. Joseph Lewando, Lecturer. Jonas W. Piper, Secretary.
129	Ashuelot	Gilsum	George E. Newman, Master. Mrs. M. A. Hammond, Lecturer. W. S. Mansfield, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
130	Ossipee Mountain...	Tuftonborough....	Charles A. Wiggin, Master. Mrs. George O. Bean, Lecturer. Mrs. Julia F. Pray, Secretary.
131	Cheshire.....	Keene.....	Daniel W. Barker, Master. Mrs. S. E. Spaulding, Lecturer. William W. Nye, Secretary.
132	Chichester.....	Chichester.....	Lester W. Hutchinson, Master. Mrs. Emma Leavitt, Lecturer. Abraham M. Drake, Secretary.
133	Wantastaquit.....	Hinsdale.....	Casper Roeder, Master. Mrs. B. S. Rouillard, Lecturer. Mrs. L. J. Davis, Secretary.
134	Marshall P. Wilder.	East Rindge.....	Zebulon Converse, Master. Mrs. Idella E. Gibson, Lecturer. Miss Mabel G. Moody, Secretary.
135	Jaffrey.....	Jaffrey.....	C. W. Fassett, Master. M. L. Culler, Lecturer. Mrs. S. S. Chamberlain, Secret'y.
136	Excelsior.....	Marlow.....	Arthur M. Russell, Master. Miss Mary A. Phelps, Lecturer. Mrs. Perley E. Fox, Secretary.
137	Riverside.....	Dalton.....	Jonathan M. Lang, Master. Mrs. Mary Britton, Lecturer. Cora W. Taylor, Secretary.
138	Great Meadow.....	Westmoreland....	George J. Bennet, Master. Charles K. Cobb, Lecturer. Mrs. Nellie F. Wells, Secretary.
139	Arlington.....	Winchester.....	M. E. Johnson, Master. Mrs. Lizzie A. Morse, Lecturer. Mrs. Ellen E. Jewell, Secretary.
140	Freedom.....	Freedom.....	Alonzo G. Fowler, Master. Mrs. Alonzo Towle, Lecturer. John C. Ferren, Secretary.
141	Amoskeag.....	Manchester.....	Frank Preston, Master. G. Waldo Browne, Lecturer. C. H. Butman, Secretary.
142	Tuftonborough.....	Tuftonborough....	Charles W. Pinkham, Master. Miss A. A. Pinkham, Lecturer. James A. Bennett, Secretary.
143	Atkinson.....	Atkinson.....	Eugene E. Sawyer, Master. Gilman Greenough, Lecturer. Truman B. Rice, Secretary.
144	Sunapee Mountain..	Goshen.....	William T. Thissell, Master. Mrs. R. E. Purington, Lecturer. Hobart B. Russell, Secretary.
145	Pistareen.....	Chesterfield Fac'y	Frank C. Hamilton, Master. Mrs. Lizzie C. Lincoln, Lecturer. Merrick E. Chandler, Secretary.
146	Pequawket.....	Conway.....	William M. Wyman, Master. Miss Jennie McMillan, Lecturer. Miss L. S. Pendexter, Secretary.
147	Richmond.....	Richmond.....	Leason Martin, Master. Mrs. N. M. Wheeler, Lecturer. Mrs. L. S. Freeman, Secretary.
148	Hooksett.....	Hooksett.....	Arthur A. Kimball, Master. Miss W. E. Davis, Lecturer. C. E. Nutting, Secretary.
149	Granite State.....	Newton.....	Will G. Battles, Master. Mrs. G. H. Battles, Lecturer. Miss Anna L. George, Secretary.
150	Junior.....	Goffstown Centre.	David G. Roberts, Master. Guy Roberts, Lecturer. Miss Carrie A. Tirrel, Secretary.
151	Meriden.....	Meriden.....	A. B. Chellis, Master. Mrs. Hatte S. Bugbee, Lecturer. Mrs. Marion Eastman, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
152	Blackwater	Andover	Everard C. Perkins, Master. Miss Lizzie White, Lecturer. Nathan Woodbury, Secretary.
153	Honor Bright	East Sullivan	Arthur H. Rugg, Master. Mrs. R. S. Rugg, Lecturer. C. W. Buckminster, Secretary.
154	Fitzwilliam	Fitzwilliam	Timothy Blodgett, Master. Mrs. Anna M. Phillips, Lecturer. D. F. White, Secretary.
155	Merry Meeting	Alton	Oscar E. Davis, Master. Meville Adams, Lecturer. Miss Edith V. French, Secretary.
156	Surry	Surry	George K. Harvey, Master. Miss Minnie Harvey, Lecturer. John A. Weber, Secretary.
157	Trojan	Troy	John H. Congdon, Master. George W. Mason, Lecturer. Mrs. J. C. Whitemore, Secret'y.
158	Mount Israel	San dwich	Charles B. Hoyt, Master. Herman H. Quimby, Lecturer. A. S. A. Gilman, Secretary.
159	Lincoln	West Swanzey	Clarence J. Eames, Master. J. O. Rich, Lecturer. Mrs. Carrie E. Young, Secretary.
160	Carroll	Ossipee	James A. Chute, Master. A. J. Ham, Lecturer. J. E. Hodgdon, Secretary.
161	Jeremiah Smith	Lee	Frank J. Davis, Master. B. Frank Davis, Lecturer. Mrs. Grace B. Dudley, Secretary.
162	Newfound Lake	Bristol	Z. E. Tilton, Master. Mrs. J. McMurphy, Lecturer. Woodbury Sleeper, Secretary.
163	Hampstead	Hampstead	Andrew M. Moulton, Master. Mrs. M. S. F. Smith, Lecturer. Mrs. L. R. Sanborn, Secretary.
164	Crescent Lake	North Barnstead	A. J. Chamberlain, Master. Mrs. Josie M. Foss, Lecturer. B. Frank Dow, Secretary.
165	Chocorua	Tamworth	Edward S. Pollard, Master. Gilman Rice, Lecturer. Francis P. Remick, Secretary.
166	Patuccoway	Nottingham	James H. Kelsey, Master. Edward F. Gerrish, Lecturer. Miss Maria E. Kelsey, Secretary.
167	Candia	Candia	Benjamin F. Lang, Master. Mrs. V. M. Rowe, Lecturer. Frank E. Page, Secretary.
168	Salem	Salem	John M. Taylor, Master. Cora F. Taylor, Lecturer. Benj. R. Wheeler, Secretary.
169	Chester	Chester	Addison A. Bean, Master. Nathan W. Goldsmith, Lecturer. George S. West, Secretary.
170	Winnicutt	Stratham	George A. Wiggin, Master. R. M. Scammon, Lecturer. Mrs. Geo. A. Wiggin, Secretary.
171	Hampton Falls	Hampton Falls	Warren J. Prescott, Master. Warren Brown, Lecturer. Arthur W. Brown, Secretary.
172	Keeneborough	Brentwood	Arthur W. Dudley, Master. Mary O. Caverly, Lecturer. Charles Flanders, Secretary.
173	Kensington	Kensington	Josiah D. Prescott, Master. Emma J. Webster, Lecturer. Sarah A. Green, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
174	Hillside	Eaton	Frank M. Hatch, Master. Fred R. Thompson, Lecturer. Howard M. Drew, Secretary.
175	Ossipee Lake	Centre Ossipee	Charles Sceggell, Master. Mrs. Sarah E. Spear, Lecturer. Winnifred S. Chase, Secretary.
176	Piscataqua	Newington	Frederick Pickering, Master. Miss E. A. Pickering, Lecturer. E. Oscar Pinkham, Secretary.
177	Kingston	Kingston	John M. Prescott, Master. Mrs. Mary A. Osgood, Lecturer. Mrs. Abbie A. Clark, Secretary.
178	Lovell Union	Wakefield	George A. Field, Master. J. I. Sanborn, Lecturer. E. A. Himes, Secretary.
179	South Newmarket	South Newmarket	Frank P. Neal, Master. H. G. Burley, Lecturer. H. W. Smith, Secretary.
180	Fremont	Fremont	Alden F. Sanborn, Master. Lincoln F. Hooke, Lecturer. Miss L. May Currier, Secretary.
181	Sandown	Sandown	Edwin C. Mills, Master. Mrs. Nellie C. Sanborn, Lecturer. Charles H. Brown, Secretary.
182	Windham	Windham	Horace Berry, Master. Mrs. A. G. Armstrong, Lecturer. Mrs. M. F. Anderson, Secretary.
183	Rockingham	Epping	Charles E. Folsom, Master. John J. Tilton, Lecturer. Miss Mary A. Evans, Secretary.
184	Penacook Park	West Concord	Frank E. Dimond, Master. Joseph H. Jackman, Lecturer. Asa Bachelder, Secretary.
185	Centennial	Barrington	Henry F. Cater, Master. Miss Madge H. Locke, Lecturer. Edith L. Locke, Secretary.
186	Plaistow	Plaistow	Moses B. Dow, Master. Miss N. B. Cheney, Lecturer. Mrs. Minnie I. Ray, Secretary.
187	Danville	Danville	Charles H. Bardley, Master. Charles P. Griffin, Lecturer. Mrs. Mary C. Reed, Secretary.
188	Rumney	Rumney	W. D. Baker, Master. C. H. Greeley, Lecturer. G. P. Cook, Secretary.
189	Bow	Bow	David N. Morgan, Master. Alex McKee, Lecturer. Eva M. Colby, Secretary.
190	Sugar River	No. Charlestown	M. J. Whipple, Master. C. E. Whipple, Lecturer. Mrs. H. W. Jenney, Secretary.
191	Sunset	Madison	David Knowles, Master. Miss E. M. Forrest, Lecturer. I. A. Forest, Secretary.
192	M. L. Ware	West Rindge	Orren F. Sawtell, Master. Mrs. Sarah A. Stearns, Lecturer. Mrs. L. S. Wetherbee, Secretary.
193	Lewis W. Nute	Milton	Bard B. Plummer, Master. W. K. Norton, Lecturer. Charles A. Jones, Secretary.
194	Hiram R. Roberts	Rollinsford	George H. Yeaton, Master. Mrs. Annie W. Bean, Lecturer. Charles A. Ham, Secretary.
195	Greenland	Greenland	E. A. Libby, Master. Earnest Holmes, Lecturer. Mrs. Mary L. Berry, Secretary.

LIST OF SUBORDINATE GRANGES AND THEIR OFFICERS.—*Continued.*

Number.	Name.	Location.	Officers and Office.
196	Silver Mountain.....	Lempster.....	Arthur L. Benway, Master. Mrs. Susie B. Hurd, Lecturer. Miss Ada M. Gile, Secretary.
197	Moultonborough....	Moultonborough..	George R. Lamprey, Master. Chas. E. Blanchard, Lecturer. Edgar S. Goss, Secretary.
198	Winnisquam.....	East Tilton.....	H. N. Gilman, Master. Miss Alice C. Durgin, Lecturer. Solon R. Baker, Secretary.
199	Wentworth.....	Wentworth.....	Walter E. Piper, Master. Mrs. Eva M. Brown, Lecturer. Hiram D. Morey, Secretary.
200	Warren.....	Warren.....	Albert M. Barber, Master. Mrs. John Howland, Lecturer. Miss Mamie Davis, Secretary.
201	Cherry Mountain....	Carroll.....	Charles S. Miles, Master. Mrs. C. S. Miles, Lecturer. Mrs. Wm. Rosebrook, Secretary.
202	Green Mountain	Effingham.....	G. W. Shaw, Master. Frank A. Harmon, Lecturer. Sadie Stokes, Secretary.
203	Bethlehem.....	Bethlehem.....	James E. Vial, Master. Fred D. Lewis, Lecturer. Mrs. Fred D. Lewis, Secretary.

This popular farmers' organization, numbering in the state about 13,000 members, has witnessed a year of advancement. Twelve Pomona and 170 Subordinate Granges have now been established, and are holding meetings in the interest of agriculture in all sections of New Hampshire. More than 4,000 such meetings have been held during the year, and they have exerted a great influence in the social and educational development of the farmer and his family. The annual meeting of the State Grange was held at Manchester, December 19, 20, and 21, and was attended by representatives of 150 Granges in the state. The exercises were attended by such enthusiasm as to indicate an active interest in the order on the part of officers and members. We present the address of the master and report of the secretary, as representing the work accomplished during the year.

ANNUAL ADDRESS.

BY NAHUM J. BACHELDER, MASTER STATE GRANGE.

Members of the State Grange:

We are assembled to-day, as an organization representing the farmers of New Hampshire, to devise ways and means for advancing the agricultural interests of our state without antagonizing any other business or profession. It is a pleasing fact that we are assembled in the same hospitable city where, nineteen years ago, the New Hampshire State Grange was given birth, and commenced its somewhat uncertain and doubtful career in the interest of the farmers of our commonwealth. Those doubts and uncertainties have been removed, and we meet under most favorable auspices, with reason for congratulation upon the grand work accomplished in the interest of agriculture and upon the success in bringing culture, refinement, and happiness to thousands of farm homes. Through the influence of this organization, the isolation of farm life has been overcome, and through the intelligence and skill introduced into farming methods, agriculture in our state is fast becoming a pleasant and respectable vocation. This fact is not only pleasing to those who have labored zealously for the success of the organization, but it is also gratifying to all who take an interest in the welfare and prosperity of our rural sections. In the future, as in the past, the humble farm homes on our hillsides and in our valleys, will furnish the men who will rule the affairs of our state and nation, and any means which contributes to their perpetuity will be hailed with gladness by all people whose regard is to be desired. The fact has become recognized that our organization was not founded merely for amusement, but to accomplish great objects, and although much has been done in the past, there is still greater and more necessary work for the future. Action should be taken at this session upon various matters of a public nature, calling for action throughout the state and advancement all along the line.

CONDITION OF THE ORDER IN THE STATE.

Since our last annual session, no Grange in New Hampshire has become dormant. During the same period, twenty-seven Subordinate and three Pomona Granges have been organized, making the present number of active Subordinate Granges 159, and Pomona Granges twelve. The present membership of the Subordinate Granges is about 12,000, having made an unprecedented net gain since we were last assembled. The reports of the worthy secretary, general deputy, and masters will furnish you information in detail, in regard to the condition of the order throughout the state. It can be truly said that the numerical increase is accompanied by corresponding interest and zeal among the members in carrying forward Grange work in all its branches, and the state organization here assembled has a responsible duty to perform in shaping the course of thought and action of this great and thoroughly organized force. We should constantly bear in mind the fact, that with increased power and influence comes increased responsibility, and we should give thoughtful consideration to the effect of our action, not only upon the farming interests, but upon the general welfare and prosperity of the state. The order enjoys to-day an unblemished reputation for conservative and progressive action, and we should be watchful that no backward steps be taken in this matter.

THE NATIONAL GRANGE.

In accordance with a resolution adopted at the last session of the State Grange, an invitation was extended to the National Grange to hold the 26th annual session in New Hampshire. The invitation was accepted, and members of the Grange throughout the state had the privilege of attending the National Grange, and of meeting members of the order from all sections of the country.

It is customary for masters to report, in their annual address to the State Grange, the business transacted at the previous session of the National Grange, but you are already so familiar with it that it hardly seems necessary. It was, undoubtedly, the

grandest gathering ever assembled in the name of agriculture in New England, and the utterances made on public questions will meet the approval of the progressive New England people. The National Grange again placed itself on record in favor of free delivery of mail in the rural districts, the anti-option bill, and the pure food bill. A report was adopted, recommending the formation of farmers' saving and loan associations, on a similar plan to that already in successful operation in city and village building and loan associations, which are proving of such inestimable benefit to the laboring people. State Granges were urged to recommend liberal appropriations by state legislatures for highway improvements, and $1,000 was appropriated for establishing Grange headquarters at the World's Columbian Exposition. The National Grange refused, by a large majority, to endorse the scheme for two per cent. loans by the government upon farm property, and added to its glory thereby. Although farmers are not generally wealthy, they are no beggars for public support. When it becomes the policy of the government to loan money upon all kinds of property at a low rate of interest, then the farmers can claim their just share. The National Grange is not endorsing schemes simply to please the ear of some of its constituents, but advocates those measures that are sound and business like. We are not in favor of, but opposed to, class legislation, whether in agricultural matters or any others. On the whole, the National session was characterized by harmony and good feeling, and its influence will be felt for years to come in New Hampshire and throughout New England.

THE AGRICULTURAL COLLEGE AND EXPERIMENT STATION.

During the time the New Hampshire College of Agriculture and Mechanic Arts was located at Hanover, it did not receive the patronage from the farmers of the state which should be given to the institution. Various reasons were assigned as the cause of this, chief among which was its connection with a classical institution which overshadowed the agricultural department in power and influence. No feasible plan for a removal

suggested itself until, by the death of Benjamin Thompson of Durham, a large sum of money was bequeathed, under certain restrictions, to found an agricultural college or school in the town of Durham.

The Grange early became interested in the acceptance of this bequest by the state, and the removal of the former college to Durham. Through the action of the State Grange, Board of Agriculture, and other organizations, the provisions of the will were accepted, and a liberal sum was appropriated by the state to provide the necessary buildings. In June of the present year the officers of the State Grange, on invitation of the trustees of the institution, formally assisted in laying the corner stone upon which the main college building now stands. The ceremony was appropriate and impressive, and was carried out in the presence of several hundred people. The buildings are now nearing completion, and it is expected during the next year the college will open for students. The Grange has a responsibility in making the college a success. Having asked for and received the state appropriation for its establishment, we are now expected to manifest our faith in the institution by giving it our patronage. It is not only our privilege but our duty to become interested in its management and see that our servants, the faculty, perform their duties faithfully. We should insist that the best qualified man in the country be placed at the head of the institution, and we think there should be no longer delay in finding him. Whoever is placed there will need months to organize the various departments and place the institution before the people in a way to win patronage. We insist that agriculture in its various branches be taught as far as practicable, to the end that the instruction there gained may enable the young farmers of New Hampshire to become more successful tillers of the soil.

We hail with pride the fact that New Hampshire will soon have a distinct and separate agricultural college, open to both boys and girls, already liberally established and endowed, and we will use every effort to make it a success. The committee appointed to visit the college and station will report in detail at this session in regard to the institution.

THE GRANGE STATE FAIR.

Through the continued liberality of Hon. Charles E. Tilton, the Grange State Fair Association held its seventh annual exhibition on the convenient and attractive grounds at Tilton, Sept. 13, 14, and 15, 1892. The reputation established in previous years, for a clean and meritorious exhibition, was fully sustained, and the annual fairs of the New Hampshire Grange Fair Association have taken a prominent place among the state fairs of New England. The management have wisely excluded all objectionable features, and the educating influence exerted by the Grange state fair is having a perceptible effect upon New Hampshire agriculture. While all the departments of the fair of the present year were superior, it was remarked by competent judges that the exhibition of live stock was the best ever made at a state fair in New Hampshire. Although unfavorable weather interfered somewhat with the financial result, yet the receipts were sufficient to pay all expenses and premiums and leave a small amount to be added to the surplus. We are glad to commend in the heartiest terms this excellent farmers' fair, and urge its continued support.

BUSINESS FEATURES OF THE ORDER.

The experience of the past has not been such as to encourage an effort in developing the business features of the order, and yet we are constantly receiving requests from various sections of the state for some system of trade arrangements. They have in Pennsylvania a trade-card system which has proven fairly successful, and possibly a similar system could be made practicable by the coöperation of the Granges in New England. The annual outlay by members of the Grange in New Hampshire, for fertilizers, grain, and agricultural implements, amounts to a vast sum, and we are convinced that, if any arrangement is made, it should be with special reference to these articles. The saving of even a small per cent. profit would amount to a large sum in the aggregate.

In order to make any coöperative business arrangement successful, it will need to be laid out on a broad scale. Commer-

cial fertilizers are sold to-day with a very narrow margin of profit, but there enters into the cost of the fertilizers large sums for agents' services and expenses, commissions, bad bills, and storage.

If the Granges in New Hampshire would agree upon a formula from which fertilizers would be made, and place an order early in the season, with a reliable manufacturer, for 150 cars of fertilizer, to be delivered to the different Granges, a sample from each to be taken and analyzed, and if equal to the contract, the goods to be paid for in cash, there would be effected a greater annual saving than it now costs to run the entire Grange in New Hampshire. If 500 cars of grain are wanted, it could be purchased directly from the great storehouses of the West, and effect another saving of like proportion. These arrangements would necessitate the paying of cash for the goods on arrival.

We do not make any recommendations in this matter, but simply suggest these points in the line of the business features of the order, leaving the subject for the consideration of the Grange, as well as the working out of any details of the arrangements.

HIGHWAY IMPROVEMENT.

No subject of a public nature is more prominently before the people of the state, and receiving more earnest thought and consideration, than the building and improvement of highways.

Agitation of this subject has been somewhat stimulated by the rapidly increasing summer boarding industry, for the development of which good roads are essential. Any radical change of existing laws upon the subject will meet with opposition, yet if those laws can be improved upon there should not be the slightest hesitancy about making a change. All great reforms have been started against violent opposition, for some people are inclined to follow in the old ruts, and this is both practically and figuratively true in speaking of road improvements.

In earlier times, when farm crops and labor constituted the legal tender for bills contracted by one farmer with another, and with the grocer, the miller, and the blacksmith, and the farmer and the hired man exchanged farm products for labor, there was

enacted a law by which the repairing of the highway was also paid for in labor, and from that day to this, in most towns of the state, men and boys (without regard to efficiency or strength), have annually gone through the form of working out the highway taxes, being credited therefor fifteen cents an hour, from the first effort to find the worn-out hoe in the morning until it was returned to its place at night, whether or not it had served for any other purpose than a walking-stick. Since the enactment of the law money has taken the place of more bulky commodities as mediums of exchange.

The invention of the road-machine has worked a revolution in the method and expense of repairing highways, and there is no reason why business principles should not apply to this matter as well as to any other. The law allowing the payment of highway taxes in labor has been rightly termed "highway robbery." We believe the highway district system and the payment of highway taxes in labor should be abolished, and the entire charge of the highways of the town placed in the hands of one or more competent persons. Some means should be devised whereby a liberal state appropriation would be judiciously and economically expended in improving the general condition of the highways throughout the state. Whether this should be through a state road commission, or some officer or board of officers already created, we express no opinion at this time.

We recommend that a committee of three be appointed from the State Grange, to coöperate with a similar committee already appointed by the state board of agriculture, to prepare and introduce in the legislature a bill for the better supervision and maintenance of our public highways.

TAXATION.

For a long time there has existed among the farmers of the state an idea that farm property bears an unjust proportion of the burden of taxation, while other property bears less than its just share or evades taxation altogether. If this opinion is a correct one, there is either an injustice in our present taxation laws or in the execution of the same. Early in the present year, an effort

was made to have a thorough discussion of the taxation question conducted in the Pomona and Subordinate Granges of the state, and, if possible, discover the fault and devise a remedy.

For some reason, this movement failed to materialize, and no progress has been made. We believe it to be the most important question before the Grange of the state at the present time, and in some way it should receive earnest attention and consideration. In urging this matter, we recommend no warfare on any person or corporation, but self-preservation is the first law of nature, and we should know our own rights in this matter and then take means to secure them. If farm property is not unjustly taxed, let us stop this continual grumbling about it; and if it is unjustly taxed, find a remedy and apply it.

LECTURE WORK.

While we rejoice in the past growth and present strength of the Grange in New Hampshire, we are reminded that it will not be safe to rely upon either of these for future progress. It will require more than ordinary effort to continue the same ratio of increase in membership, and it will require the exercise of all our resources to hold the interest and stimulate to activity in Grange work this large membership. The most potent factor in accomplishing this lies in the lecture field. In sections of the state where comparatively few Granges have been organized, among those Granges which are not in a flourishing condition, and among the large number of new Granges just organized, the members of which are anxiously expecting some leadership in mental work, there is a great demand for lecture work.

Our able state lecturer, the officers of the State and Pomona Granges, are all active and zealous in this matter, and still the fact remains that at our August meetings, and in the localities which we have previously mentioned, there is an opportunity for grand work by outside assistance in the lecture field. In view of these facts, we recommend that such a sum as may be deemed best be appropriated and placed under the direction of the executive committee of the State Grange, for lecture purposes.

FARMERS' POLITICAL PRIVILEGES.

Farmers have so long been accustomed to keeping silent on matters of a public nature, that they often fail to become interested in affairs which directly concern themselves.

It is a sad commentary on the farmers, in the recent elections, that only three practical farmers are elected to the New Hampshire legislature from one of the agricultural counties of the state.

Probably nine tenths of the people of the county are dependent upon agriculture for a subsistence, and should be interested in the laws which govern them, and yet they were so entirely indifferent to their own interests as to be represented by another class of people. We refer to this instance in proof of our assertion that, as farmers, we fail to look after our own interests.

We advocate no new political party, but we wish to earnestly impress the necessity of being represented in our state legislature and in congress, by men who know the needs of the farmer, and who will advocate only those measures which will entitle him to an equal share of what the harvest yields. Farmers are apt to leave these matters until they are fixed in the interest of some politician or corporation, and then fight it out in grumbling. Farmers, why would n't it be a good idea to fix these things ourselves, and let the other fellows do the grumbling? I make these suggestions in the interest of no class legislation, for we are opposed to it from start to finish, but in the interest of good government and honest administration.

THE GRANGE MUTUAL FIRE INSURANCE COMPANY.

Among the practical financial benefits which the Grange in New Hampshire has secured to its members, should be prominently mentioned the work of the Grange Mutual Fire Insurance Company.

Organized less than four years ago, and insuring only property owned by members of the Grange, it now has 1,600 policies in force, covering property to the value of $2,200,000. The expense of the insurance to the insured is the actual cost, with no charges for expensive office rents, salaries, or profits.

During the existence of this company, the cost to its policy

holders has been one half of one per cent. for three years' insurance, and from this rate of premium all losses and expenses have been paid, and a small surplus is in the treasury. We take pleasure in recommending this company as safe, sound, and reliable, and worthy the patronage of every member in the state.

THE NEWSPAPER PRESS.

The most powerful agent in the state in shaping public opinion, and the most potent influence in building up or destroying an enterprise or organization, is the newspaper press, and the success which has attended Grange work in New Hampshire is, in some measure, due to the loyal support and constant encouragement received therefrom. Specially do we make due recognition of the support of those papers which championed the cause of the Grange during its early days, and have since established regularly conducted Grange departments. The members of the order should appreciate this interest by liberal patronage and contributions to the Grange department. Any short item of news in regard to Grange work will generally be published, if sent to the paper, and we lose a valuable opportunity for building up our organization when we fail to place before the reading public a correct impression in regard to our objects and purposes. It is an opportunity for which business enterprises are glad to pay liberally. Gratefully acknowledging the favors accorded us by the press in the past, we hope that the course of our organization in the future may be such as to continue to merit and receive their commendation and support.

WOMAN'S WORK IN THE GRANGE.

The principle in our order which declares that we recognize the ability and sphere of woman, has been fully carried out by the annual appointment of a special committee on woman's work.

This important feature has constantly grown in usefulness and popularity. An able committee was appointed at the last session, and we shall expect a report on the subject, to which your attention is invited.

WORLD'S COLUMBIAN EXPOSITION.

The World's Columbian Exposition, which is to open in Chicago, May, 1893, will be the grandest exposition of industrial art and agricultural science that the world has ever witnessed.

The scale upon which it is arranged is almost beyond our conception, and will afford an opportunity for obtaining a vast fund of information. Although New Hampshire is not preeminently an agricultural state, yet in certain lines we excel, in quality and in quantity produced per acre, the fertile states of the great prairies. Only one state exceeds our own in the yield of corn per acre on a ten-years average, and no state exceeds in value per acre the corn crop in New Hampshire during the same period.

In quality of fruit products we are second to no state in the Union, and during the present season New Hampshire grown apples have found an active market in all the states of the West.

Our dairy products are gaining an enviable reputation from the favorable conditions of feed, air, and water under which they are produced, and the intelligence and skill applied to their manufacture.

Cereals, fruits, dairy products, vegetables, and maple products should be shown at this great exposition, and advertise to the millions of people who will attend from all sections of the world that New Hampshire farms are capable of producing as fine quality of these things as can be grown anywhere. This organization should become interested in this matter and in the means for accomplishing it.

THE SUMMER BOARDING INDUSTRY.

No class of people is more apt to fail to appreciate the beauties with which they are constantly surrounded, than are the tillers of the soil. The Grange has done a great work in bringing about a change in this respect, and its instruction teaches us to make the country not the home of the person only but of the soul.

As we contemplate the grand mountains, magnificent lakes, charming rivers, and health-giving forests of New Hampshire, we are stimulated to higher and better things, and recognize in a true sense the attractions of our rural homes. The vast summer boarding industry which reaches one hundred and fifty towns of our state and utilizes the accommodation of two thousand farm-houses and hotels, brings annually to our midst one hundred thousand people to enjoy this same country life. It is an industry which exceeds in value any single agricultural production, and its profits are shared by thousands. It should be fostered and encouraged, for it is the one industry for which our state is peculiarly adapted. Our highways should be improved, the beauty of our forests should be preserved, and the natural attractions of New Hampshire should be so widely and extensively advertised as to build up this great industry to its utmost proportions. Economy on the part of the state is praiseworthy, but false economy in dealing with the extension of the summer boarding business in New Hampshire is extravagance in the extreme. With the right effort the volume of the summer business in our state can be doubled within the next few years.

FREE PUBLIC LIBRARIES.

At the last session of the State Grange, attention was called to a law enacted at the previous session of the legislature for the establishment of free public libraries. The law has since been made operative, and at the last March meeting 81 towns voted to accept the provisions of the law. Of this number about 60 complied with the law sufficiently to entitle them to state aid, and books have been furnished them. This is a very gratifying result for the first year's work of the library commission, and we trust that the Granges throughout the state will become still more interested in the movement and assist in bringing to every rural town the educating influence of a good public library.

FINANCIAL.

A sound financial condition is a valuable acquisition to any organization, and in prosperity it should always be the policy to make wise preparation for adverses that are liable to occur.

The total receipts of the year have been $4,385.16, and the expenses $3,286.39. This makes a net gain of receipts over expenditures of $1,098.77, which, added to the cash on hand at the beginning of the year, gives a cash balance of $4,920.08.

The report of the worthy treasurer will show the receipts and expenditures in detail. The result is gratifying, and indicates a healthy condition of our finances.

IN MEMORIAM.

The silent messenger which sooner or later will issue a summons to all, has been within our ranks during the year, and taken to that bourne from whence no traveller returns, loved and honored members.

We no more shall hear their merry voices, no more listen to their wise counsel, no more receive their fraternal hand-clasp, and we hope that they have received an abundant reward, and been ushered within the gates of the great grange above. We are called to mourn the death of,—

Coleman W. Murch, Past Master of Nashua Grange No. 13, died in December, 1891.

Horace O. Felch, Past Master of Bradford Grange No. 58, died January 6.

Elmer G. Smith, Past Master of Eureka Grange No. 69, died January 7.

Lucinda, wife of Past Master John L. Streeter, of Spafford Grange No. 82, died January 23.

Walter L. Moar, Master of Hollis Grange No. 12, died April 4.

Eliza J., wife of Past Master John K. Richardson, of Uncanoonuc Grange No. 40, died June 17.

Vinnia E. Crockett, wife of Past Master J. Frank Crockett, of Laconia Grange No. 120, died July 27.

Mary J. Ellis, wife of Past Master W. G. Ellis, of Lancaster Grange No. 48, died July 24.

James W. Cogswell, Past Master of Crystal Lake Grange No. 101, died November 8.

Richard T. Muzzey, Master of Sunapee Lake Grange No. 112, died December 9.

IN CONCLUSION.

In conclusion, we desire to express to our associate officers, and to the members of the Grange, our appreciation of the kind assistance that has been accorded us on every hand, in our endeavor to perform the duties of the office. We have devoted as much time to the work as could be spared from other important duties, and have given our best efforts to the success of the organization.

We are more firmly impressed than ever with the grand possibilities that are before it, and believe that with conservative management it is destined not only to lead the farmer and his family to a life of greater prosperity, culture, and refinement, but also to have a great influence in shaping the policy of the state on important subjects bearing upon the welfare of all our people. It is therefore essential that good counsel attend our action, that we may direct the power of this great organization, not in any narrow and bigoted channel, but in such a course as will tend to develop the resources of New Hampshire, build up her industries, and bring prosperity to the cause of agriculture by such progressive action as will bring prosperity and happiness to the entire people of our commonwealth.

REPORT OF E. C. HUTCHINSON, SECRETARY OF STATE GRANGE.

Worthy Master:

In accordance with constitutional requirements, we submit the annual report of your secretary for the year ending September 30, 1892. And it is but just that we should be pleased with the year's record.

From September 30, 1891, to September 30, 1892, there have been twenty-six Granges organized, as follows:

Crescent Lake, No. 164, North Barnstead, William H. Berry, master.

Chocorua, No. 165, Tamworth, Albert S. Pollard, master.

Patuccoway, No. 166, Nottingham, James H. Kelsey, master.

Candia, No. 167, Candia, Benjamin F. Lang, master.

Salem, No. 168, Salem, Charles T. Maxwell, master.

Chester, No. 169, Chester, Addison A. Bean, master.

Winnicut, No. 170, Stratham, George A. Wiggin, master.

Hampton Falls, No. 171, Hampton Falls, Frank S. Green, master.

Keenborough, No. 172, Brentwood, Arthur W. Dudley, master.

Kensington, No. 173, Kensington, Harrison Rowe, master.

Hillside, No. 174, Eaton, Frank M. Hatch, master.

Ossipee Lake, No. 175, Centre Ossipee, Daniel Abbott, master.

Piscataqua, No. 176, Newington, Frederick Pickering, master.

Kingston, No. 177, Kingston, John W. Prescott, master.

Lovell Union, No. 178, Wakefield, Edwin A. Himes, master.

South Newmarket, No. 179, South Newmarket, Frank P. Neal, master.

Fremont, No. 180, Fremont, Alden F. Sanborn, master.

Sandown, No. 181, Sandown, Edwin C. Mills, master.

Windham, No. 182, Windham, Horace Berry, master.

Rockingham, No. 183, Epping, C. E. Folsom, master.

Penacook Park, No. 184, West Concord, J. E. Shepard, master.

Centennial, No. 185, Barrington, H. F. Cater, master.

Plaistow, No. 186, Plaistow, Moses B. Dow, master.

Danville, No. 187, Danville, Charles H. Bradley, master.

Making 154 active Subordinate Granges, September 30, 1892, with a membership of 11,274.

The additions are from the following sources: By initiations, males 744, females 785; by dimits, males 52, females 44; by reinstatements, males 35, females 38; by charter members of new Granges, 610; making a total gain of 2,308.

The losses are: By suspension for non-payment of dues, males 238, females 236; by dimits, males 114, females 138; by withdrawal, males 21, females 44; by death, males 60, females 53. This deducted from the total additions leaves a net gain of 1,404, and makes a total membership for the year ending September 30, 1892, of 11,274.

Since September 30, five Granges have been organized.

Sugar River, No. 190, Charlestown, November 12, M. J. Whipple, master, with 26 charter members.

Sunset, No. 191, Madison, David Knowles, master, with 17 charter members.

Mary L. Ware, No. 192, West Rindge, Oren F. Sawtelle, master, with 42 charter members.

Lewis W. Nute, No. 193, Milton, B. B. Plumer, master, with 30 charter members.

Greenland, No. 194, Greenland, Edward A. Libby, master, with 60 charter members.

Amoskeag, No. 141, Manchester, still retains its position at the head of the list in membership, with 301 members; while Pembroke, No. 111, Pembroke, has 235 members, and Grafton Star, No. 60, of Hanover, has 201 members. There are twenty-nine other Granges having a membership of 100 or over, as follows:

Souhegan, No. 10, Amherst, 140 members.
Hollis, No. 12, Hollis, 112 members.
Thornton, No. 31, Merrimack, 166 members.
Uncanoonuc, No. 40, Goffstown, 131 members.
Narragansett, No. 46, Bedford, 121 members.
White Mountain, No. 50, Littleton, 114 members.
Winnipesaukee, No. 51, Meredith, 142 members.
Joe English, No. 53, New Boston, 103 members.
Rochester, No. 86, Rochester, 153 members.
Warner, No. 90, Warner, 177 members.
Harmony, No. 99, Sanbornton, 103 members.
McClary, No. 102, Epsom, 142 members.
Fruitdale, No. 106, Mason, 138 members.
Friendship, No. 110, Northfield, 138 members.
Capital, No. 113, Concord, 146 members.
Golden Rod, No. 114, Swanzey, 124 members.
Mount Washington, No. 116, Whitefield, 121 members.
Lawrence, No. 117, Belmont, 100 members.
Loudon Surprise, No. 121, Loudon, 103 members.
Scammell, No. 121, Durham, 121 members.
New Hampton, No. 123, New Hampton, 107 members.
Lebanon, No. 126, Lebanon, 106 members.
Ashuelot, No. 129, Gilsum, 115 members.
Cheshire, No. 131, Keene, 188 members.
Chichester, No. 132, Chichester, 108 members.
Excelsior, No. 136, Marlow, 119 members.

Arlington, No. 139, Winchester, 101 members.
Atkinson, No. 143, Atkinson, 102 members.
Junior, No. 150, Goffstown Centre, 106 members.

Among the Granges which have initiated large numbers are,— Gilman, No. 1, 27 members; Sullivan, No. 8, 23 members; Greenfield, No. 23, 28 members; Peterborough, No. 32, 22 members; Winnipesaukee, No. 51, 32 members; Joe English, No. 53, 25 members; Rochester, No. 86, 25 members; Warner, No. 90, 29 members; Capital, No. 113, 21 members; Golden Rod, No. 114, 25 members; Lawrence, No. 117, 20 members; Laconia, No. 120, 20 members; New Hampton, No. 123, 27 members; Ashuelot, No. 129, 24 members; Excelsior, No. 136, 27 members; Riverside, No. 137, 23 members; Arlington, No. 139, 36 members; Amoskeag, No. 141, 45 members; Junior, No. 150, 25 members; Mount Israel, No. 158, 33 members; Jeremiah Smith, No. 161, 21 members, and Hampstead, No. 168, 30 members.

Three Pomona Granges have been organized during the year, as follows:

West Rockingham, No. 10, at Hampstead, Henry C. Sanborn, Auburn, master.

East Rockingham, No. 11, at Exeter, H. Scammon, Exeter, master.

Suncook Valley, No. 12, at Pembroke, Charles B. Rogers, Hooksett, master.

Making 12 Pomona Granges, having a membership of 3,020, September 30, 1892. Membership, September 30, 1891, 2,315; making a net gain of 709.

The gains are as follows: By initiation, males 370, females 301; reinstated, males 4, females 8; dimit, males 3, females 1; charter members, 235.

The losses are: By suspension for non-payment of dues, males 125, females 129; dimit, males 18, females 15; withdrawals, males 4, females 3; deaths, males 9, females 4.

Cash receipts for the year, as follows:

Fees for Sixth Degree, at State Grange, December 17, ... $102.00

Cash returns for December quarter, 1891 . . .	$884.04
" " March " 1892 . . .	930.40
" " June " 1892 . . .	984.44
" " December " 1892 . . .	1,081.86
Total receipts, as per treasurer's report . . .	$3,982.78

The receipts for the year ending September 30, 1891, were $3,462.95, making a net gain for the year of $519.83.

The expenses of the office for the year have been as follows:

Postage	$99.71
Printing (including journals and rosters, and stationery for officers)	420.15
Office expenses and incidentals	27.43
Total expenditures	$547.29

An itemized exhibit of the foregoing receipts and expenditures has been submitted to your executive committee, duly approved and audited by them.

An advance has been made all along the lines, in Grange work, during the past year, and the unprecedented number of Granges organized, and the large increase in membership, show what may be accomplished by concentrated action of both officers and members, and let us take fresh courage and press steadily on.

NEW HAMPSHIRE GRANGE STATE FAIR ASSOCIATION.

OFFICERS.

Warren Tripp, *President* . . .	Short Falls.
John G. Tallant, *Vice-President* . .	East Concord.
George H. Wadleigh, *Treasurer* . .	Tilton.
Nahum J. Bachelder, *Secretary* . .	East Andover.

EXECUTIVE COMMITTEE.

P. C. Clough	Canterbury.
D. G. Roberts	Goffstown Centre.
Thomas J. Courser	Warner.

DIRECTORS.

John D. Lyman, Exeter.	James W. Foss, Merrill.
Myron C. Foster, Canterbury.	Fred W. Jones, West Canaan.
Ira Brockway, Washington.	Oliver B. Mills, Enfield Centre.
William R. Howard, Wilton.	M. P. Clark, West Springfield.
George W. Hurd, Newport.	Arthur R. Ford, Danbury.
Milton P. Bailey, Claremont.	W. E. Wilson, Canaan.
Clarence L. Trow, Amherst.	E. T. Chase, Deerfield Centre.
David Clement, Hudson Centre.	Albert F. Moore, Hebron.
A. H. Spaulding, Hollis.	John D. Clark, Strafford.
J. L. H. Marshall, Nashua.	Charles W. Davis, Dover.
Andy Holt, So. Lyndeboro.	G. A. Spafford, Brattleboro, Vt.
George P. Dickey, Alstead.	M. T. Blaisdell, E. Rochester.
Stanley H. Abbott, Wilton.	Wesley J. Cilley, Potter Place.
Frank O. Lamson, Mt. Vernon.	Orrin J. Cross, East Andover.
Frank E. Russell, Greenfield.	John F. Jewell, Warner.
James W. Fitch, Cornish Flat.	Wm. H. Chadwick, N. Sutton.
E. E. Parker, Reed's Ferry.	M. C. Southmayd, West Campton.

George D. Epps, Francestown.
Fred M. Davis, Hancock.
Arthur F. Rockwood, Temple.
Albert O. Smith, Peterborough.
F. W. Prichard, New Ipswich.
Albert W. Pressey, East Derry.
Frank D. Pattee, Henniker.
George Pattee, Goffstown.
George McNeil, Deering.
Sewel E. Hoyt, East Weare.
C. G. Pillsbury, Londonderry.
William F. Connor, Bedford.
Charles A. Jefts, Drewsville.
Zeb Twitchell, Grange.
F. H. Cross, Monroe.
D. B. Crane, Littleton.
E. F. Wiggin, Meredith.
Ansel F. Gove, Lakeport.
Wm. Woodbury, New Boston.
Wm. B. Morse, South Weare.
Henry W. Keyes, No. Haverhill.
Robert T. Gould, Contoocook.
Jonathan Merrill, Bradford.
H. L. Flint, Hanover.
R. H. Lambert, Lyme.
Wm. E. Gay, Hillsboro Centre.
Geo. W. Thompson, Laconia.
R. B. Foster, Loudon Village.
George H. Whitcher, Durham.
M. H. Merrow, New Hampton.
Chas. H. Burnham, Jefferson.
Geo. W. Stanley, Drewsville.
O. T. Purmont, Lebanon.
Henry C. Sanborn, Auburn.
G. B. Clark, Wolfeborough.
George H. Leach, Gilsum.
Albert A. Bertwell, Ossipee.
E. E. Rugg, Keene.
F. E. Towle, N. Chichester.
George P. Slate, Hinsdale.
Zebulon Converse, E. Rindge.
B. Frank Varney, Penacook.
E. A. Todd, New London.
William H. Chase, Stoddard.
John T. Harvey, Pittsfield.
William A. Holt, Antrim.
Otis G. Sanborn, East Tilton.
John Kilborn, Webster.
F. T. Collins, Gilmanton I. W.
James H. Tripp, Short Falls.
Rufus P. Pierce, Dublin.
J. W. Folsom, Salisbury.
Samuel D. Bemis, Chesham.
F. S. Spalding, Pratt's.
F. R. Woodward, Hill.
E. D. Kelley, Franklin Falls.
George W. Silver, Penacook.
Edwin D. Forrest, Tilton.
Martin H. Cochran, Suncook.
John D. Folsom, S. Newbury.
William P. Ballard, Concord.
Geo. G. Page, Box 758, Keene.
Fred'k Taylor, Munsonville.
Joseph W. Kelso, Whitefield.
Charles H. Foss, Tilton.
John R. Farnum, Marlboro'.
Josey L. Davis, Cen. Barnstead.
George D. Judkins, Bristol.
C. H. Emerson, Hampstead.
W. H. Berry, North Barnstead.
Catherine Sleeper, Tamworth.
T. E. Fernald, Nottingham.
F. D. Rowe, Candia Village.
James Ewins, Salem.
A. P. Morse, East Chester.
William Lester, Stratham.
G. F. Merrill, Hampton Falls.
Charles B. Snyder, Brentwood.
John A. Blake, Kensington.
Horace Drew, Eaton.
L. E. Moulton, Moultonville.
Fred'k Pickering, Newington.

F. J. Lawrence, Jaffrey.
James M. Howard, Marlow.
David Hurlburt, Dalton.
Henry L. Pierce, Park Hill.
S. M. Morse, Winchester.
Silas A. McDaniel, Freedom.
Adam Dickey, Manchester.
John A. Edgerly, Mirror Lake.
Jay M. Goodrich, Atkinson.
Eugene Purington, Mill Village.
Wm. H. Pierce, Chesterfield.
J. W. Whittaker, N. Conway.
Silas O. Martin, Richmond.
W. C. Saltmarsh, Hooksett.
I. M. Heath, Newton Junction.
F. P. Stevens, Goffstown Centre.
Josiah Davis, Meriden.
Charles E. Currier, Andover.
Horace R. Fifield, E. Sullivan.
Harvey A. Clark, Fitzwilliam.
Chester A. Twombly, Alton.
Charles H. Blake, Surry.
H. M. Whittemore, Troy.
G. O. Hanson, Centre Sandwich.
N. C. Carter, West Swanzey.
A. J. Hamm, Leighton's Corner.
John C. Bartlett, Lee.
Levi S. Bartlett, Kingston.
H. E. Rogers, Wolfeboro Junct.
H. W. Smith, East Epping.
George W. Ball, Fremont.
John S. Colby, Sandown.
G. F. Armstrong, Canobie Lake.
C. E. Folsom, West Epping.
Asa Batchelder, Concord.
W. B. Swain, East Barrington.
G. S. Towle, Haverhill, Mass.
Charles P. Griffin, S. Danville.
William D. Baker, Quincy.
W. E. Nesmith, Box 403, Concord.
E. R. Megrath, N. Charlestown.
N. K. Forrest, Silver Lake.
C. H. Thomas, West Rindge.
Charles A. Jones, Milton.
Chas. Plummer, Salmon Falls.
Mrs. W. H. Brackett, Greenland.
C. D. Strafford, East Lempster.
James E. French, Moultonboro'.
H. Q. Dalton, East Tilton.
Charles Merrill, Wentworth.
Charles Foote, Warren.
Moses C. Gilman, Carroll.
Mrs. C. W. McIntire, Wing Road.
G. W. Shaw, Effingham Falls.

This association held the eighth annual exhibition at Tilton, Sept. 12, 13, and 14, 1893, enjoying favorable weather and a large attendance.

The exhibits in all departments excelled any previous year, and the attractions were of the same high order always characterizing this exhibition. The speaking was conducted on a more extensive scale than usual, and included addresses by His Excellency Governor Smith, Hon. J. H. Brigham, of Ohio, Master of the National Grange, Rev. C. S. Murkland, president of New Hampshire Agricultural college, and other prominent men. The entire receipts of the fair were $7,656.53.

APPENDIX.

APPENDIX.

NEW ENGLAND AGRICULTURE.[1]

BY THE SECRETARY.

The change constantly taking place in agriculture in all sections of the country is a fruitful subject for discussion, and has in the past commanded the attention of thinking men directly interested in the success of agriculture as well as those connected with mercantile pursuits largely dependent upon agricultural prosperity. The various transformations have been more closely watched and results more carefully noted in no section than in New England, not from the effect which New England agricultural products have upon the general supply and market price of the country, but from the interest everywhere accorded that intelligence and thrift always manifested by the sturdy New England farmers. Volumes have been written and published upon this subject, and animated discussions have been carried on in every conceivable place, from the halls of congress at Washington to the corner store and country tavern in the most obscure New England village. From these there has been developed the somewhat popular belief, not only among farmers but in a greater or less degree among people in the various avenues of trade and the professions, that agriculture in New England has suffered a serious decline.

This sentiment has had something to do in creating a feeling of unrest among farmers, and had an effect in inducing young men to leave the farm for other callings in which they have frequently made a disastrous failure. This erroneous idea, for such it must be termed, is generally entertained by those who have failed to give the subject a careful and impartial investigation in all its relations to the farmer's life, and in its fullest and broadest sense.

[1] Prepared for the U. S. Department of Agriculture.

In making a comparison for an intelligent discussion of this subject, it will be necessary to call to mind, not the inflated period during or following the Civil War, but a period immediately preceding 1860, when there was little heard about agricultural depression, and farmers considered the business fairly remunerative.

Agriculture, to be successful, must always be conducted in accordance with the demands of the times, and the farming methods employed in the earlier period were in no way adapted to the business as followed to-day. It is not necessary to consider in detail those primitive methods, or the farmer's social and political position at that time, for they are matters of history.

Little agricultural investigation had been made, and even the most important principles of agricultural science, had they been established, would have been of no avail, for the people were not prepared to receive them. Agricultural machinery had not been invented, and farmers' organizations were but little known. The silo—one of the most valuable aids to New England agriculture—was introduced years later. The farmer was following in the hard-beaten track of a generation, and unconsciously extracting from the soil in the form of crops the elements of fertility which had been accumulating for ages. In the form of beef, mutton, wool, and potatoes these crops were placed upon such markets as the country afforded, the farmer failing to realize the fact that the resources of the bank from which he was drawing annual dividends were liable to be crippled. The money thus obtained was locked up in interest-bearing securities, reserving little for comforts and nothing for luxuries, making immediate preparation for another draft upon the soil. This process continued upon cultivated and pasture land until the cash value of the available nitrogen, phosphoric acid, and potash was largely transferred from the soil of the farm to the savings-bank. The farmer was industrious, working early and late, and the hired man expected to do the same.

No time was devoted to social culture and no money to educational advantages. The experience of the farmer and his family was generally limited to the immediate neighborhood. They

were contented with this style of living because they had experienced no other, were satisfied with their income and bequeathed to their descendants a reputation for industry and economy and generally a bank account. Their success was not due to a prosperous agriculture but to their habits of industry and matchless economy. The reckless extravagance which the inflated currency of the war period stimulated among all classes, was shared by the farmer as was the change in all branches of business which followed to meet the exigencies of the times. Farming in New England to-day is an entirely different business from that of the earlier period briefly referred to. The farmer is in one sense a manufacturer, and must intelligently combine fertilizers and labor in accordance with the teachings of agricultural science based upon the laws of nature. The farm crops of New England exhibit a greater variety than of extreme soil exhaustion, having been largely superseded by such products as require special intelligence and skill, and which the local markets demand in a fresh condition.

By the aid of improved machinery the hours of labor are shortened twenty-five per cent. and the work is less laborious. An intensive system of agriculture is taking the place of an extensive system, larger and better crops being produced on smaller areas. This is illustrated in the production of corn, which for the decade ending with 1889 was an average of 31.25 bushels per acre for the New England states, while the average for the country was 24.1 bushels. Only one state exceeded the yield in New Hampshire of 32.7 bushels, while the average value of the crop per acre was not excelled by any state.

The luxuries and comforts in the New England farmer's home never afforded those of the present day. These have been added so gradually that they are almost regarded as necessities, and their enumeration would even surprise the owners themselves. The New England farm buildings are generally kept in good repair, and with their contents and surroundings are matters of surprise to farmers of newer sections, and are homes of such comfort as were little anticipated by the early New England settlers.

Pianos, pictures, and bric-à-brac were articles seldom seen in

the farmer's home, but are now articles of so general adoption as to excite little comment and sometimes fail to be properly appreciated.

The fine teams which are found in many farmers' stables would once have been the envy of the country squire or minister, who were regarded as entitled to a little more than an equal share of those comforts of life. The social opportunities of the farmer and his family are increasing each year, and their value is being better appreciated. The agricultural fairs, conducted by town and district societies, and social gatherings of various kinds in many sections of New England, are the leading events of the year attended by those who once would have been in no way attracted to anything of an agricultural character. These gatherings are noted for the absence of style and false show, and for the true Puritanical simplicity in which they are conducted. The adoption of the town system of schools in place of the district system has more equally divided school advantages, and the otherwise increased efficiency of school and school systems has enabled the farmers' children to more than keep pace with city children in educational matters. In view of these facts, it is apparent that although the farmer may not be depositing more cash in saving institutions than formerly, when we consider his condition in a broader sense, and take into calculation the style of living, the social and educational advantages, the hours and character of labor performed, and the various opportunities for developing a noble manhood and womanhood among the agricultural classes, we cannot fail of being favorably impressed with the present condition of affairs.

These changes in agriculture have taken place in accordance with a common law in the development of any country with no varied resources, as in New England. Among the agencies producing this change may be mentioned the development of numberless water-powers, causing to appear busy cities and prosperous villages, constantly enlarging their limits and affording an increasing demand for a great variety of productions of the soil. The extension of railroads in various sections has made available the products of many farms which were formerly useless from inaccessibility. Improved farm machinery and the teach-

ing of agricultural science have come to the aid of the farmer in supplying this demand. Fruit culture, both large and small, has doubled within a brief period, and the recent discussions for the prevention and destruction of injurious insects have enabled the grower to receive sure and profitable returns. The poultry business, in its various phases, is receiving increased attention, and farms entirely devoted to this industry are of no uncommon occurrence. Dairying leads all the systems of farm husbandry, and the products are annually increasing. In the state of New Hampshire over fifty creameries have been established within eight years, and have made available the grain and forage crops on many farms previously returning but little income. Milk routes extending from the large cities, sometimes a distance of one hundred and fifty miles, convey large quantities of milk and cream daily in refrigerator cars to markets which cannot be adequately supplied. New England has an enviable reputation for the quality of her fruit and dairy products. The grand natural scenery of the picturesque mountains, charming lakes, and romantic valleys, together with a healthy and recuperative climate, has lately developed a great cash value.

But a few years ago the first summer hotel was erected, and now the business of entertaining summer boarders from all sections of the country has extended to every hillside and valley. In New Hampshire the volume of this business has caused the collection of statistics by state authorities, and it appears that about 2,000 hotels and boarding-houses are annually filled with summer visitors. These houses are constantly being enlarged and improved, and have accommodations for about fifty thousand people. From five to eight millions dollars are annually left in the state from this industry.

This has brought a brisk home market to the farmers' doors, and all the products of the orchard, garden, and poultry-house find an active demand, at good prices, for three months in the year. This business is rapidly growing, and no one can intelligently anticipate its future possibilities.

Wealthy people from the cities are purchasing farms in all sections of the state, on which they are expending large sums

of money in making attractive homes for themselves and friends during the summer months. These people spend from three to five months of the year at their country estate, and are constantly making expensive improvements in land and buildings. Farmers, mechanics, and business men in the vicinity are naturally receiving financial advantage from these lavish expenditures. We have thus briefly called attention to the growth of manufacturing cities and villages, the extension of railroads, improved farm machinery, teachings of agricultural science, fruit culture, poultry raising, creameries, the summer boarding industry, and the transformation of farms to elegant country estates, as agencies affecting not only the profits, but the attractions as well, of New England agriculture.

Failure to mention one other agency of peculiar and diversified force in elevating New England agriculture would be an inexcusable neglect. We refer to that farmers' organization which finds favorable conditions for success in the minds of the intelligent New England farmers, the Patrons of Husbandry, commonly termed the Grange. Seven hundred and fifty Subordinate Granges are in active operation, having enrolled more than fifty thousand members. Ten thousand meetings are annually held for the discussion of agricultural subjects, and for social and educational development. Its salutary effect is apparent, and the future historian will have reason to devote much space to the work of this organization.

The abandoned farms of New England have furnished a subject for frequent discussion in recent years, but an intelligent understanding of their significance reveals no sign of a declining agriculture. In fact, their significance is indicative of progress, and a desire on the part of the farmers to adapt themselves to the changed conditions of the times.

Along the banks of small streams, in all sections of New England, may be found evidences of the existence, at some former time, of shops and factories devoted to various purposes. Later, the improvements in manufacturing methods had a tendency to centralize power and capital, supplanting hand labor by machinery, and hundreds of mill sites were abandoned for cheaper production and better-paid labor in large establishments. No

one claimed any decline in manufacturing by reason of this change. Many farms located on rugged hill-tops and in remote sections, which under the former system of agriculture and style of living yielded their owners satisfactory returns and all the social and educational advantages demanded, have been abandoned, as far as cultivation is concerned. Although they met the requirements of their time, they could not be utilized by the advanced system of agriculture, and were wisely turned to pasture or devoted to the growth of wood and lumber.

This transformation was as significant of progress as in the case of shops and factories. This class of lands have no business in the catalogue of available abandoned farms.

There is, however, a class of farms scattered over New England, at present, which from the absence of a better term have been classed as abandoned farms. These are farms on which are generally found tenantable buildings, productive soil, and located in an intelligent community. The hay and fruit are annually gathered, and the pasturage is utilized, by parties who own the farm. The house is unoccupied, and the farm is for sale. This state of affairs has taken place in the natural course of events not uncommon to all business interests. Chief among the causes may be mentioned the death of the former occupants, without children to succeed them on the old homestead, or if they had children they left the farm and sought employment elsewhere while the parents were able to manage the farm, and are now engrossed in other business and cannot return. Frequently the owner has not adopted the liberal style of living prevalent in recent years, and by industry and economy has accumulated a competency, and moved to the neighboring village to pass his remaining years in rest and enjoyment. The farm offers inducements to the next occupant equal to those it offered the man who had just retired. These are the principal reasons for abandoned farms, and none of them reflect upon the farm. It is a rare exception to find a farm left by the former occupant to actively engage in other business. The number of abandoned farms is no greater in proportion to the total number of farms than the number of vacant shops, mills, and stores in proportion to the total number in any rural section of our country. The

cause for these is not ascribed to declining manufacturing, mercantile, or business interests, but have occurred in the common nature of events.

Several New England states have manifested enterprise in advertising the vacant or abandoned farms, and with great success. These farms are rapidly being taken by thrifty farmers for the practice of intelligent and progressive agriculture, and by wealthy people to be transformed into beautiful summer homes and elegant country estates.

A happy solution of the abandoned farms question is almost assured in the near future, through the effort thus being made. After a thorough and impartial consideration of the present condition of New England agriculture, as compared with the past, we arrive at the following conclusions:

1. Whatever decrease in fertility of soil may have taken place is generally more than balanced by the favorable conditions and surroundings existing at the present time.

2. In computing values, credit should be given by the farmer for social and educational advantages and style of living as well as the net financial income.

THE RELATION OF BOARDS OF TRADE TO THE SUMMER BOARDING INDUSTRY.[1]

BY THE SECRETARY.

In this grand country of ours there are found a great variety of natural advantages, each rendering certain sections especially adapted to certain purposes. The warm and genial climate of the Pacific coast renders that section famous the world over as a fruit-producing region, where are matured the finest fruits.

The rich and fertile soil of the western prairies, with remarkable facilities for cultivation, has become the great grain-producing region of the world, and from these boundless areas have been shipped by train-loads cereals to various countries of the globe. The South, with her rich coal and iron mines and splendid grazing lands, needs only the energy and brains of the New England born man to develop its marvellous resources.

New England, the grandest spot of all, has by its matchless water-power and the ability of its business men built up a manufacturing business which is unequalled in our country, resulting in the building of prosperous cities and providing employment for many thousand people.

Thus we notice that each section mentioned has become famous in its special line by reason of its adaptability. Another natural resource has been discovered in recent years, to be located in New England in general, and in New Hampshire in particular.

We have learned that our beautiful lakes, charming valleys, rock-ribbed mountains, and primitive forests have a value far beyond that for agricultural purposes. We find people flocking here annually from all parts of the world to spend the summer months among our granite hills, and New Hampshire takes her place as one of the great sanitariums of the world. No other section can excel her in this respect, because of her natural qualifications.

[1] Prepared for the State Board of Trade.

During the past thirty years great changes have been wrought in the condition of our rural sections. The deserted farms are not more conspicuous than the deserted mills, deserted tanneries, deserted shoe-shops, and deserted school-houses. This great change has come, mainly for the reason that the tendency has been to centralize the business of the country in manufacturing and commercial centres, made necessary by the invention of machinery and the numberless improvements in the production of all articles formerly manufactured in the little shops and mills scattered over the country towns and largely the foundation of the prosperity of many country villages.

Lured by the vast resources of the West, many a New Hampshire man has left his eastern home in the wild scramble for wealth, and many New Hampshire dollars, that should have been kept at home to develop our own resources, have found their way to the western and southern investors, and, in some instances, much easier than they have been able to find their way back. These, and many other causes, have tended to reduce our rural population, and leave not only abandoned farms, but often an abandoned farmer as well.

Previous to thirty years ago but little was known of New Hampshire as a summer resort. Its mountains were reached only by hard staging, and its lakes were almost inaccessible. A few pioneers had established boarding houses in various sections, but today a single firm in the mountains can entertain more people than all the summer hotels in the state at that time. Statistics show that, with an aggregate capacity of 30,000 people, we now have no less than 1,600 summer hotels and boarding houses scattered over 195 towns, and the best statistics at our command indicate that the vast sum of $8,000,000 is annually left in our state by summer tourists.

Do we comprehend what this sum means? The entire crop grown in New Hampshire in 1890, of corn, rye, wheat, oats, barley, buckwheat, grass seed, clover seed, beans, peas, and potatoes, at the market price would sell for a sum less by nearly four million dollars than was received in New Hampshire from the summer boarding business in 1889.

You have frequently been impressed with the effect upon

rural communities by the income from this industry. In those towns most largely interested you have noticed that the farm buildings, as a rule, are not so neglected, and there is a general appearance of thrift and prosperity. We have been interested in comparing the valuation of ten towns, one in each county, where the summer boarding business is followed, with ten other towns of equal agricultural advantages where there is comparatively no summer business. We find that the former increased in the valuation of land and buildings during a period of four years $319,000, and the latter decreased during the same period $186,000. Of the first ten towns eight made a gain in valuation, and of the last ten every one sustained a loss. In the former list seven of the ten towns decreased the tax rate, and in the latter list seven of the ten towns increased the tax rate. The inference to be drawn from this comparison forcibly suggests that those means which tend to develop the summer boarding business of New Hampshire will advance the general condition of the farming interests in the rural sections. The effect upon the social character of the rural population is always noticeable. Much of the education and culture of our people is acquired by associating with others. Those people who come to our state for the summer months are generally educated and refined, and the farmer and his family who spend the summer months in their company will acquire something in refined manners and speech. A farmer's boy frequently in company with a college professor spending successive summers in the family, will receive as much benefit therefrom as from a term in college, and many a farmer's daughter has anticipated from October till June the associations with city friends who have brought into her life not only enjoyment but have enabled her to become familiar with the little courtesies of well-bred city life, and made her happier and better. While the financial advantages to be derived are the leading consideration, the opportunities to be afforded in an educational and social way are not to be entirely overlooked.

For extending this valuable industry we should *organize*, *advertise*, and *educate*. Every advance in the world's progress has been made by the combined efforts of men exerted through organization. In the infancy of the human race the necessities

of mankind compelled them to associate for mutual assistance and protection. The earliest form of the organizations was doubtless of a family or tribal character. In time they became stronger, more complete, and more extensive, until hundreds of millions of people were sometimes embraced within the same governmental organization. Subordinate to these, similarity of belief, of aspiration, and of interest has, in every age and country, in like manner induced or compelled the formation of religious, educational, and business associations, as numerous and as various as the necessities that gave them birth. The history of the world is but the history of organization, and demonstrates alike its necessity and its beneficence. Boards of trade are a part of the great organized force that is developing the resources of our country, and prominent among those in New Hampshire is that industry of so recent origin and of such rapid growth as to hold the interest and challenge the admiration of all interested in the welfare of the old Granite state. Organization will still further promote its interests. I need not undertake to prove to you the advantages of liberal advertising, for they are conceded by all business men. Judicious advertising has brought large fortunes in a shorter period of time than hardly any other means. The attractions of New Hampshire have been advertised by the hotels, railroads, boards of trade, the state board of agriculture, and the World's Fair commissioners, but has been insignificant compared with the interests at stake. If an individual or corporation owned the state of New Hampshire with her unrivalled facilities for the development of the summer resort business, any shrewd financier would say that fifty thousand dollars a year would be a small amount to set apart for advertising. The state board of agriculture has an annual appropriation of $2,000 for advertising the advantages to be derived by locating in the rural sections of New Hampshire, and a portion has been used in calling attention to the summer resort interest, thereby indirectly advancing the agricultural interests of our state. More than fifty thousand pamphlets have been distributed, reaching nearly every city in the United States. The results obtained can never be known, but as an indicator we point to the fact that the proprietor of one summer

hotel informs us that through the agency of one of those pamphlets three families came to his house from the state of Pennsylvania, and the first season paid him eleven hundred dollars. It is not unreasonable to suppose that the cost of this work has been insignificant, compared with the advantages gained by the state through the business brought to the 1,635 houses which were named in the same pamphlet. We refer to this fact simply in proof of our statement that this business should be advertised and advertised liberally. In a state publication of the nature of that issued by the board of agriculture, it is impossible to enter into details, for every section must be represented; and when a publication becomes so voluminous as to require any great amount of time in its perusal, it loses its force as an advertising agency.

There are scores of villages in our state around which are opportunities for developing the summer resort business, and many tourists prefer to locate near such privileges as are afforded in a bustling New England village. Boards of trade could prepare such advertising material as would attractively set forth the charming scenery, delightful drives, and healthy surroundings, in such a detailed manner as to arrest the attention of the pleasure-seeker. It will not be a difficult matter to find people located in cities interested in each locality, who could aid in the distribution of such matter. Such action taken by every board of trade in *this* state would bring greater results to this industry, of which New Hampshire is so justly proud, than any agency yet in operation.

Our third suggestion is education. Every organization is, in a certain sense, an educating force, and capable of exerting a great influence in this direction. Educate the people in any line, and we have the foundation laid for permanent and progressive action. The downfall of various organizations in the history of the country was due to the fact that their purposes and principles were not supported by an intelligent constituency educated in the principles of the reform they would inaugurate. The Grange in New Hampshire largely owes its signal success to the fact that its principles are thoroughly understood and advocated by its constantly increasing membership. The action

of the organization has been successful, for the reason that it has been based upon the education of its members. Boards of trade can accomplish much in educating the people in the necessity of street and roadside adornment; in the building and repairing of good roads; in the setting of shade trees, and in the enforcement of judicious laws in the interest of stocking our waters with fish and protecting the game in our forests.

They can do much in educating the people in matters of state legislation, and in the advisibility of sending men to the legislature in the interest of the state rather than in the interest of some senatorial aspirant or grasping railroad corporation.

It may be a matter of great importance to the candidates for senatorial honors which particular one is elected, but it is a matter of far greater importance to the people of New Hampshire that men be sent to the legislature interested in such legislation as will secure a more equitable adjustment of taxation laws; the best possible system of highway supervision; the proper care of our forest areas; and the enactment and enforcement of judicious fish and game laws, all of which are of vital importance to the summer resort interests. Send men interested and qualified to act in these matters and regarding them of paramount importance, and they will be men qualified to elect officers and legislate for the people of the state. Interest in legislating for the development of the resources of the state will necessarily consist in no small degree in the development of the summer resort interest. Education in these matters can be largely promoted by boards of trade, through the means of public discussions under the auspices of the several organizations.

These associations have accomplished wonderful results in the establishment of manufacturing industries in various parts of the state, and there can be no reason why similar efforts will not develop the business of their respective localities by attention to the subject under discussion to-day.

I thank you, Mr. President, for this opportunity of expressing these thoughts in regard to one of the most important interests in our state, and express the assurance that the agricultural people will appreciate the efforts of your organization for its development.

THE NATIONAL GRANGE AT CONCORD.

BY H. H. METCALF.

The National Grange, Patrons of Husbandry, was organized in Washington, D. C., December 4, 1867, in the interests of agriculture, and to promote the material, social, and intellectual welfare of farmers and their families. Laboring under various disadvantages, but impelled by a resolute spirit and working for a noble object, the founders of the order, their associates, and successors moved forward, under varying conditions of adversity and prosperity, until at the present time the organization is the strongest and most substantial among all agricultural associations, numbering a membership of hundreds of thousands, commanding the respect of all classes of people, and universally recognized as a potent influence for good in the social, industrial, and political life of our great republic.

NATIONAL GRANGE SESSIONS.

Twenty-six sessions of the National Grange have been held. The first opened at Washington, April 19, 1869, Williams Saunders, master, presiding. The second session was held in the same city, December 8, of the same year, when, on account of the inability of the secretary to attend, an adjournment was made, subject to the call of the master. At the third session, in Washington, January 25, 1870, the secretary reported forty-nine Subordinate Granges and one State Grange—that of Minnesota—organized. The fourth and fifth sessions were also held in Washington, the former January 4, 1871, and the latter January 3, 1872. The sixth session, held in Georgetown, D. C., January 3, 1873, was the first at which state representation was had, eleven states being represented by seventeen members. At this session the seven founders of the order turned over their entire work to the National Grange, and a complete reorganization was effected. Officers were elected for a term of three years, with Dudley W. Adams of Iowa, as master.

The seventh session opened at St. Louis, Mo., February 4, 1874, and thirty-two states and two territories were represented, New Hampshire being represented for the first time, in the person of Dudley T. Chase, of Claremont, state master, and Mrs. Chase. At this session the declaration of purposes was adopted. The eighth session opened at Charleston, S. C., February 3, 1875; ninth, Louisville, Ky., November 17, 1875; tenth, Palmer House, Chicago, Ill., November 15, 1876; eleventh, Cincinnati, O., November 21, 1877; twelfth, Richmond, Va., November 27, 1878; thirteenth, Canandaigua, N. Y., November 19, 1879; fourteenth, Washington, D. C., November 17, 1880; fifteenth, Washington, D. C., November 16, 1881; sixteenth, Indianapolis, Ind., November 15, 1882; seventeenth, Washington, D. C., November 21, 1883; eighteenth, Nashville, Tenn., November 12, 1884; nineteenth, Boston, Mass., November 11, 1885; twentieth, Philadelphia, Pa., November 10, 1886; twenty-first, Lansing, Mich., November 16, 1887; twenty-second, Topeka, Kan., November 11, 1888; twenty-third, Sacramento, Cal., November 13, 1889; twenty-fourth, Atlanta, Ga., November 12, 1890; twenty-fifth, Springfield, O., November 11, 1891.

At the Springfield meeting, the place of holding the next, or twenty-sixth session, was left to the subsequent determination of the executive committee. But not a single session, thus far, had ever been held within the limits of New England, though the membership of the order had become relatively greater in this section than in any other part of the country, and New Hampshire had become the banner state of the Union in this regard. At the meeting of the New Hampshire State Grange in Manchester, Thursday, December 17, 1891, the following resolution, presented by C. C. Shaw of Milford, was unanimously adopted:

WHEREAS, We, members of the New Hampshire State Grange, assembled in its eighteenth annual session, have learned that the National Grange, at its last annual session, voted to leave the subject of the place of holding its next annual meeting in the hands of its executive committee, and in view of the long and pleasant associatlons that have existed between the two Granges, and the steadfast moral

and financial support that this Grange has rendered to the National Grange, be it

Resolved, That the executive committee of this State Grange, should they deem it advisable, be and are hereby authorized to invite the said National Grange to hold its next annual meeting in this state, and that said executive committee be further authorized to perfect such arrangements as may seem best calculated to render said meeting pleasant, profitable, and an honor to our order.

A general interest in the matter was manifested at once, not only by the patrons of the state, but by the general public, and the feeling was universal that no effort should be spared to secure for the Granite state the next annual session of so important a national body. Meanwhile, an earnest rivalry immediately appeared between the two cities of Concord and Manchester, each desiring the location, should it finally be determined to hold the session in New Hampshire, and the Concord Commercial Club and the Manchester Board of Trade, representing the business interests of the two cities, promptly directed their attention to the matter.

ACTION OF THE CONCORD COMMERCIAL CLUB.

At a meeting of the Concord Commercial Club, Geo. F. Page, president, held December 22, 1891, five days after the meeting of the State Grange, the subject was introduced, and a special committee of five members, consisting of Hon. Moses Humphrey, Hon. Stillman Humphrey, Arthur C. Sanborn, Austin F. Ranney, and George F. Page, was appointed to take the matter in charge.

At a subsequent meeting of the club, held January 26, 1892, it was voted that "the special committee appointed to extend to the National Grange an invitation to hold their next annual meeting in this city, be instructed to make the invitation a very cordial one, tendering the hospitality of the club, including the offer of all necessary facilities for holding their daily meetings, and extending every reasonable and proper inducement, the expense attendant to be borne by voluntary subscriptions."

Meanwhile, the committee acting in co-operation with the master, N. J. Bachelder, and the executive committee of the

State Grange, took such measures as seemed advisable to accomplish the object in view. The invitation was extended, and the inducements in favor of its acceptance duly presented.

The places competing for the location of the National Grange meeting were Springfield, Ill., Binghamton, N. Y., and Concord and Manchester, N. H. There was also a sentiment in some quarters in favor of Washington, D. C. The executive committee of the National Grange very properly called upon the executive committee of the New Hampshire State Grange, to decide which of the two cities, Concord or Manchester, should be considered as the New Hampshire candidate, and the committee, composed of N. J. Bachelder, chairman, D. W. Rugg, E. C. Hutchinson, *ex officio*, Charles McDaniel, secretary, and John M. Carr, voted unanimously in favor of Concord. Subsequently the following communication, announcing the settlement of the question of location, was received by State Master Bachelder, and its substance communicated to the committee of the Commercial Club and to the public:

PAW PAW, MICH., April 25, 1892.

N. J. BACHELDER,
Master of New Hampshire State Grange P. of H.:

DEAR SIR AND BRO.: The following is a true copy of the order of the executive committee of the National Grange:

PAW PAW, MICH., April 20, 1892.

The undersigned, acting for and by authority of the National Grange of Patrons of Husbandry, do hereby select the city of Concord, New Hampshire, as the place for holding the next (twenty-sixth) session of the National Grange, which will commence on Wednesday, the 16th day of November, 1892, and the executive committee of the New Hampshire State Grange is hereby authorized to make all necessary arrangements for the same, in conformity with the proposition of said committee and the Master of the N. H. State Grange, now before us in writing.

LEONARD RHONE,
X. X. CHARTTERS,
J. J. WOODMAN,
J. H. BRIGHAM, *ex officio*,
} *Executive Committee of the National Grange of Patrons of Husbandry.*

J. J. WOODMAN, *Secretary of Committee.*

At a meeting of the Concord Commercial Club, held May 10, 1892, it was voted "That the selection of sub-committees to make the necessary arrangements for the entertainment of the National Grange, and the choice of some person to canvass for subscriptions for the funds needed, be left with the special committee, with full power in the matter." The committee selected Henry H. Metcalf as canvassing agent for subscriptions, whose solicitations were generously responded to, nearly twelve hundred dollars being subscribed altogether, of which amount Capital Grange, No. 113, of Concord, contributed $100, and Rumford Grange of East Concord, $26.25.

At a meeting of the special committee of the Commercial Club, on the evening of October 3, 1892, held at the office of the State Board of Agriculture, State Master Bachelder, H. H. Metcalf, and F. E. Brown, General Passenger Agent of the Concord & Montreal Railroad, being present by invitation to coöperate with the committees, the following sub-committees were appointed:

Committee on Entertainment and Information, with power to employ assistance—H. H. Metcalf.

Committee on Decorations—Arthur C. Sanborn, L. S. Richardson, James C. Norris, Ben C. White, W. A. Thompson.

Committee on Banquet—George F. Page, Charles C. Danforth, John M. Mitchell, E. N. Pearson, C. H. Amsden, Paul R. Holden, Charles E. Staniels.

Committee on Excursions—Frank E. Brown, D. C. Prescott, N. J. Bachelder, Albert B. Woodworth.

Committee on Reception—President of the Commercial Club, Mayor and Board of Aldermen and ex-Mayors of the city.

Committee on Music—A. S. Ranney, N. J. Bachelder, John C. Linehan.

Committee on Halls—Stillman Humphrey.

Committee on Estimates—Moses Humphrey, N. J. Bachelder, and H. H. Metcalf.

It was voted to give the use of the club rooms in Opera House block for headquarters for a bureau of entertainment and information, and for reception purposes at the time of the National Grange meeting.

The several sub-committees attended diligently to their work, meeting occasionally with the special committee for conference, and upon the opening of the third week in November everything was in readiness for the reception of the National Grange and the convenient prosecution of its work, so far as the efforts and obligations of the Commercial Club and the citizens of Concord were concerned. Representatives' hall in the state house, the use of which had been freely tendered by the governor and council on behalf of the state government, was properly arranged for the business session of the Grange, and the front of the building was tastily decorated with the national colors. Elaborate decorations were also displayed upon the front of White's opera house, wherein the public session and the degree meetings were to be held, while the interior was also tastefully decorated. The Eagle hotel, wherein the officers and members of the National Grange were to be quartered, was also handsomely adorned with flags and bunting, as were a large portion of the business blocks on Main street and those adjacent thereto in the central part of the city—while a large arch, erected at the foot of Pleasant street near the railway station, was also gaily decorated, and bore the inscription—"Concord Greets the National Grange."

OPENING OF THE TWENTY-SIXTH SESSION.

Officers and members began to arrive some time before the opening of the session, Hon. Aaron Jones of South Bend, Ind., Master of the Indiana State Grange, with Mrs. Jones and daughter, being the first on the ground, and Secretary John Trimble of Washington, D. C., the next, with frequent succeeding arrivals, all being cordially greeted by representative citizens and Patrons, till the opening of the session in Representatives' hall, at 11 o'clock, Wednesday, A. M., November 16, with the Worthy Master, Col. J. H. Brigham of Ohio, presiding. There was a good attendance, which was increased by arrivals during the day and the morning subsequent, and included altogether the following:

OFFICERS.

Master, J. H. Brigham, Ohio.
Overseer, E. W. Davis, California.
Lecturer, Mortimer Whitehead, New Jersey.
Steward, Ava E. Page, Missouri.
Assistant Steward, O. E. Hall, Nebraska.
Chaplain, Charles McDaniel, New Hampshire.
Treasurer, F. M. McDowell, New York.
Secretary, John Trimble, Washington, D. C.
Pomona, Mrs. E. Bowen, Connecticut.
Flora, Mrs. E. P. Wilson, Mississippi.
Lady Assistant Steward, Mrs. Laura C. Douglass, Massachusetts.
Executive Committee, Leonard Rhone, Pennsylvania, chairman; J. J. Woodman, Michigan; secretary, X. X. Chartters, Virginia; J. H. Brigham, *ex officio*.

Mrs. Brigham of Ohio, Ceres, was absent on account of illness, and her chair was filled by Mrs. Rhone of Pennsylvania. L. F. Batchelder of Tilton, N. H., occupied the post of Gatekeeper in the absence of W. N. Nelson of Tennessee,

STATE REPRESENTATIVES.

[Masters of State Granges and their wives.]

Connecticut—G. A. Bowen and Mrs. Bowen, Woodstock.
California—E. W. Davis and Mrs. Davis, Santa Rosa.
Colorado—E. W. Working and Mrs. Working, Denver.
Delaware—John C. Higgins, Delaware City.
Illinois—J. M. Thompson and Mrs. Thompson, Joliet.
Indiana—Aaron Jones and Mrs. Jones, South Bend.
Iowa—J. E. Blackford, Algona.
Kansas—A. P. Reardon and Mrs. Reardon, McLouth.
Kentucky—J. D. Clardy and Mrs. Clardy, Newstead.
Massachusetts—Elmer D. Howe and Mrs. Howe, Marlboro.
Mississippi—S. L. Wilson and Mrs. Wilson, Okoloma.
Missouri—Ava E. Page and Mrs. Page, Appleton City.
Maine—M. B. Hunt and Mrs. Hunt, Belmont.
Michigan—Thomas Mars and Mrs. Mars, Berrien City.
Nebraska—O. E. Hall and Mrs. Hall, Pawnee City.
New Hampshire—N. J. Bachelder and Mrs. Bachelder, East Andover.
New Jersey—John Statesir, Colts Neck.
New York—W. C. Gifford and Mrs. Gifford, Jamestown.

North Carolina—W. R. Williams, Falkland.
Ohio—S. H. Ellis and Mrs. Ellis, Springboro.
Oregon—R. P. Boise, Salem.
Pennsylvania—Leonard Rhone and Mrs. Rhone, Centre Hall.
Rhode Island—A. M. Belcher and Mrs. Belcher, Arnold's Mills.
Texas—John B. Long and Mrs. Long, Rusk.
Vermont—Alpha Messer and Mrs. Messer, Rochester.
Virginia—X. X. Chartters and Mrs. Chartters, Fredericksburg.
Washington—D. L. Russell and Mrs. Russell, Vancouver.
West Virginia—C. H. Knott and Mrs. Knott, Molers.

Alabama, Georgia, Minnesota, Maryland, South Carolina, Tennessee, and Wisconsin State Granges, from sickness and other unavoidable reasons, were unrepresented.

Many visiting patrons were in attendance from abroad, including very large delegations from Massachusetts, Rhode Island, and Connecticut, with many from Maine and Vermont, and some from New York, Pennsylvania, Ohio, Michigan, and other states, and, although a severe rain-storm prevailed nearly the entire week, greatly to the regret and disappointment of all concerned, there were a large number of New Hampshire patrons present during the more important days of the session, which continued through the week, and until Friday evening following, November 25.

Occasions of particular interest in connection with the session were the public meeting, the sixth and seventh degree meetings; the excursion through the Crawford Notch, White Mountains; the banquet and reception complimentary to the National Grange by the Concord Commercial Club; the trip to Manchester and visit to the mills in that city, and the conferring of the third and fourth degrees of the order before the National Grange in Phenix hall, by Capital Grange, No. 113, of Concord, upon invitation of the State Grange.

THE PUBLIC MEETING.

The public meeting, or open session, in White's Opera House, opening at 2 p. m., on Thursday, was attended by an audience which filled the spacious hall and balcony to its utmost capacity, while many went away because of inability to get within hearing distance of the stage. Many of the most

distinguished citizens of Concord and of New Hampshire were present, and the exercises continued from two o'clock until half-past five without the slightest relaxation of interest. National Master Brigham presided, and the order was as follows: Music by Blaisdell's orchestra; address of welcome on behalf of the New Hampshire State Grange, N. J. Bachelder, master; response, Hon. S. L. Wilson of Mississippi; welcome on behalf of the state, Gov. Hiram A. Tuttle; response, National Master Brigham; original song, written by Mrs. H. A. Hill of Derry, by Grange choir; welcome to the city, Mayor H. W. Clapp; response, by Mortimer Whitehead of New Jersey, lecturer of the National Grange; welcome to New England, Past Master James Draper of Massachusetts; response, S. H. Ellis of Ohio; song, "Hurrah for New England," choir; address by Senator W. E. Chandler; response by Judge R. P. Boise of Oregon; address by Ex-Governor D. H. Goodell of Antrim; response by J. C. Higgins of Delaware; music by orchestra; address by Hon. Warren F. Daniell of Franklin, congressman from the Second New Hampshire district; response by Hon. John B. Long of Texas; singing, "America," audience.

DEGREE MEETINGS.

On Thursday evening, in the opera house, and on Friday at 1 p. m., the sixth degree of the order was impressively conferred upon two classes, numbering together upwards of seven hundred, while at 4 and 8 p. m., on Friday, two classes received the seventh and highest degree of the order, whose combined numbers were 1,441, being by far the largest number ever inducted into the mysteries and clothed with the solemn obligations of this degree at any session of the National Grange, and this, notwithstanding the fact that the rain fell in blinding sheets nearly all the day and evening.

On Friday morning, in acceptance of the invitation of Hon. William E. Chandler, the members of the Grange inspected the fine new printing establishment of the Republican Press Association.

While the degree work was in progress in the opera house, Friday afternoon, an open meeting was held in Phenix hall, at

which S. H. Ellis, master of the Ohio State Grange, presided, and brief addresses were made by Messrs. Jones of Indiana, Clardy of Kentucky, Hale of Connecticut, Williams of North Carolina, Mars of Michigan, Gifford of New York, Reardon of Kansas, Long of Texas, Knott of West Virginia, Lyman of New Hampshire, and others.

THE WHITE MOUNTAIN EXCURSION.

Saturday, November 19, had been set apart for an excursion to the White Mountains and through the Crawford Notch, arranged by the Commercial Club, whose invitation was unanimously accepted by the Grange, and no little anxiety as to the state of the weather had been manifested throughout the week. But the furious storm which had been prevailing ceased at midnight, Friday night; the morning broke clear and beautiful, and one of the most delightful days of late autumn followed. Shortly after seven o'clock the special train, provided for the occasion by the Concord & Montreal R. R., steamed out of the station for the northward, with nearly every member of the National Grange, in attendance, aboard, accompanied by prominent officers and members of the State Grange, visiting Patrons from many states, and citizens generally, to the number of about three hundred, altogether, escorted by a committee designated by the Commercial Club, under the chairmanship of Hon. Moses Humphrey.

Many of those on board the train were on their first visit to New Hampshire, others still had never seen the mountain region of the state, and it was specially fortunate that, considering the lateness of the season, the day was so favorable for observation. The atmosphere was particularly clear. As the train sped along, the different points of interest were pointed out to the visitors, the Grange State Fair grounds at Tilton first coming in for general observation. Lakes Winnisquam and Winnipiseogee appeared to excellent advantage, and the grand mountain ranges of Carroll county were clearly outlined beyond the latter. The camp grounds and cottages at Weirs were noted, the beauty of the Pemigewasset and Baker river valley enjoyed, the grand form of Mt. Moosilauke and the broad meadows of the Connecticut at Haverhill and Newbury

contemplated with pleasure; but it was not till the detour to the right was made at Woodsville, and the excursion took its way up the valley of the dashing Ammonoosuc, past Lisbon and Littleton, into the very heart of the mountain region, that the deep springs of wonder and admiration in the hearts of the visitors were fully moved.

A caterer had been provided, and a generous lunch was served previous to the arrival at Fabyan's, at which point a short stop was made for a fair look at the mountains in all their grandeur. The Presidential range was slightly capped, but, fortunately, at this very time the fleecy cloud which obscured the summit of Mt. Washington parted, fairly disclosing the hoary head of the mountain monarch, and leaving the hotel at the summit plainly in view. Resuming the cars, the journey was continued, and the train moved slowly on down through that grandest of our eastern mountain passes—the Crawford Notch—the objective point of the journey, Upper Bartlett, being reached about 2 p. m., and the return journey commenced about half an hour later.

The mountain forests were relieved of their foliage, and the rocky formations stood out in more striking relief than is the case at earlier periods in the season. There was more of grandeur, and a different type of beauty was presented. The heavy rains had swollen the mountain streams, and they fell over the steep ledges in foaming cascades at numberless points on either side, appearing as lines of silver in the distance; while the towering mountain masses awakened various sensations in the minds of the observers. Some who had passed through the canons of the Rockies declared that they had seen nothing grander or more striking in nature than was here presented, while it was generally conceded that this trip through the heart of the White Mountains was alone worth the journey to New Hampshire, even from the most distant state. The return trip was mainly devoted to sociability, and the time passed most pleasantly until the arrival home, shortly after seven p. m.

SUNDAY SERVICES.

At a number of churches in town, reference was had in the service, Sunday morning, in one way or another, to the occa-

sion of the National Grange meeting, the attention of the several pastors having been called to the matter by the Commercial Club committee; and the visiting Patrons very generally attended, many seeking churches of the particular denomination with which they were allied, but nearly all the National Grange members being present at the Universalist church, where the pastor, Rev. T. W. Illman, preached an eloquent and forceful sermon upon the "Significance of the Grange," which was so greatly admired that the executive committee secured the manuscript and ordered 1,000 copies printed in pamphlet form for the benefit of members and for general distribution.

On Sunday afternoon at three o'clock, in Representatives hall, the Grange held impressive memorial services in honor of the members who had died during the year past—viz.: William M. Ireland, one of the seven founders of the order, and William G. Wayne, past master of the New York State Grange, the same being open to the public, and attended by many interested visitors outside the membership of the order.

THE COMPLIMENTARY BANQUET.

On Monday evening, November 21, at eight o'clock, occurred the banquet and reception in honor of the National Grange, tendered by the Commercial Club at the Eagle hotel. Music was furnished by Blaisdell's orchestra, H. G. Blaisdell, director. Col. C. C. Danforth, chairman of the banquet committee, was master of ceremonies. Harley B. Roby, the newly elected president of the Commercial Club, presided, Rev. T. W. Illman was chaplain, and Col. John C. Linehan officiated as toastmaster. Many distinguished citizens, including Governor Tuttle, accompanied by Mrs. Tuttle, were present, and at half-past eight, after the usual exchange of courtesies and greetings, the march was led to the dining hall by President Roby and wife, followed by the governor, National Master Brigham, the speakers of the evening, members of the National Grange and Commercial Club, and guests, to the number of about 150 persons altogether. The tables were finely arranged and decorated, and the menu, as designated upon neat and novel cards

making a handsome souvenir of the occasion, was thoroughly creditable to Manager Pelren, as testified by the interested attention paid to the same by the company, for an hour or more, after which the feast of reason and flow of wit was in order.

President Roby called to order, and, after an appropriate address of welcome, introduced Colonel Linehan as toast-master, and under his happy and inimitable direction the balance of the evening's programme was carried out, as follows, all the responses being most felicitous and holding the undivided attention of those present:

"The State of New Hampshire." Responded to by Governor Hiram A. Tuttle.

"The National Grange," Col J. H. Brigham of Ohio, Master.

"New Hampshire as a Summer Home," Hon. N. B. Bryant, East Andover.

"Woman's Work in the Grange," Mrs. M. H. Woodman of Michigan.

"Education," Hon. J. W. Patterson, State Superintendent of Public Instruction.

"The Farmer in Congress," Hon. John B. Long of Texas.

"The Young Man of the Day," Hon. Moses Humphrey, Chairman State Board of Agriculture.

Poem—"The Granger Boy," Rev. S. C. Keeler, Concord.

"The Relation of the Grange to Other Industries," Hon. Aaron Jones of Indiana.

"The New Hampshire State Grange," E. J. Burnham of Manchester, Lecturer.

"Politics of the Grange," Hon. E. W. Davis of California.

"The Pioneers of the Grange in New Hampshire," Hon. John D. Lyman of Exeter, first master of Gilman Grange, No. 1.

"A Voice from the Nutmeg State," Mrs. George Austin Bowen of Connecticut.

"The Concord Commercial Club," George F. Page, Ex-President and Chairman of the Special Committee.

The speaking concluded shortly after midnight, and a notable evening in the history of the Commercial Club and of the National Grange was pleasantly ended.

EXCURSION TO MANCHESTER.

Again, Tuesday afternoon, the Grange accepted the hospitality of the Commercial Club, in an excursion to Manchester, to inspect some of the great mills of that city, which was also a new experience with many of the members, who had never before been inside of a cotton factory. Going down at two o'clock, the delegation, which, including Patrons and accompanying citizens, numbered about one hundred and fifty, were met at the Manchester station by a committee from the Manchester Board of Trade and Amoskeag Grange, headed by Secretary H. W. Eastman of the former and Master E. J. Burnham of the latter, and, by courteous permission of the managers, escorted through some of the larger mills of the Amoskeag and Manchester corporations, the first important point of interest being the monster new West-Side gingham mill of the Amoskeag, the largest cotton factory in America, which was inspected from the basement to the roof, while in full operation, and from the latter, which, by the way, is three acres in extent, a fine view of the city was obtained. The different processes of manufacture were witnessed in the Manchester mills, and a visit to the print works concluded the tour of inspection in time to return to Concord at 5 : 40.

At eight o'clock that evening the members of the National Grange and many visiting Patrons witnessed the work of the third and fourth degrees of the order at the hands of Capital Grange, in Phenix hall, the same being admirably done, a brief entertainment following.

The business sessions of the Grange continued through the week, until Friday night, various questions of importance being discussed and acted upon, except that the forenoon session on Thursday—Thanksgiving day—was omitted, the members largely attending the union service at the Universalist church, where an appropriate sermon was preached by Rev. C. B. Crane, D. D., pastor of the First Baptist church.

CLOSE OF THE SESSION.

As the final session was nearing its close, Friday evening, all business having been completed, Worthy Master Brigham

expressed his pleasure and satisfaction with the meeting and its outcome, and especially with the generous hospitality and kind attention bestowed by the Commercial Club and the Concord public, and all with whom they had been brought into relationship during their sojourn in New Hampshire, and concluded by calling upon a representative of Capital Grange and presenting, through him, to that organization, the beautiful rosewood gavel which he had used during the session. After the brief words in acceptance of this token, Master N. J. Bachelder, on behalf of the New Hampshire State Grange, expressed his thanks and those of the order in the state for the pleasure and honor accorded and experienced in this visit of the National Grange to New Hampshire, and bade all the members a godspeed on their homeward journey. Various members of the National Grange were briefly heard in expression of their individual satisfaction with the session and all its pleasurable incidents, and at half-past ten the twenty-sixth session of the National Grange, holden in Concord, New Hampshire, was declared adjourned, and passed into history.

On the morning of the day following, another clear and beautiful Saturday in November, the members of the Grange remaining, a portion having already taken their departure, bade adieu to the many friends they had made in Concord, and started on their return journey to their various homes in the different states of the Union, from the Atlantic seaboard to the "Golden Gate," bearing, as is confidently hoped, pleasant thoughts of New Hampshire, of her beautiful capital city, and of its people, who will remember with pleasure for years their visit and sojourn here.

THE APPLE.[1]

BY J. L. GERRISH.

Could I go back twenty-five or thirty years, with the surety of long life and a permanent location, it would, I think, be wise to set several acres of the best and most workable land on the farm to apple-trees.

LOCATION.

If the situation can be free from large stones and free for setting long, straight rows, it will add much to the convenience of thorough cultivation, and for spraying and picking as the trees come into bearing. For these purposes it is not necessary that the land be level, but slightly sloping land furnishes natural drainage and may be a protection from too much sun or prevailing winds.

Exposure to north and west winds is thought better than those from the east, but a forest or a belt of trees planted at the same time as the orchard may serve to overcome any disadvantage of location, evergreen trees being the most desirable as a wind-break.

SOIL AND VARIETIES.

Different varieties require the soil to which they are adapted in order to secure best results.

The Rhode Island Greening will succeed on light, dry soil, while the Northern Spy succeeds on moist, sandy soils. The best place for the Baldwin is on a coarse loam.

If the land is moist, it is no disadvantage if a ledge underlies, and that not many feet from the surface.

The best place for the Roxbury Russet is where a water-bar delivers the road-wash, or where the drainage of a sink-spout or a barn-yard gives it continual fertilization.

[1]Prepared for Farmers' Institutes.

Besides adapting the variety to the soil, there are some things that will influence us in selecting varieties other than adaptability of soil. The market is of as much consequence as anything in deciding what to raise, and our market has called for the Baldwin for many years and will doubtless continue to do so for a long time to come.

There may be an apple coming which will supersede the Baldwin, but with no definite knowledge on this score we should plant largely of that variety, although it is not absolutely perfect. We recommend that to the majority, but we have, as an individual, such a prejudice in favor of limb-grafted trees that we might plant home-raised seedlings altogether and graft with popular varieties when the limbs were large enough.

We are not expected to extend our remarks on this part of the subject in this paper, for want of time, but there are arguments in favor of that method, the principal ones being the longevity of the tree and the possibility of deciding on varieties a few years, at least, nearer the fruitage of the orchard.

While the Baldwin is good, in years of great plenty one could almost wish his apples were sweet, on account of their feeding value. This is one of the factors to enter into the calculation when deciding what varieties to plant. We speak of Baldwins and sweets from the general market and feeding standpoint, yet there are special varieties, like the Gravenstein and the Fameuse, that bring remunerative prices even when Baldwins are plenty.

We think the McIntosh Red is superior to the Fameuse and near enough to it in quality.

It may not be out of place to say something of varieties for the family. In ordering these, avoid making a cranky collection of all sorts, unless you feel like giving your time and good soil to raising as an experimenter for the benefit of others, to your own cost. Endeavor to cover the season from the last of summer till the beginning of the next. We should have the Blinkbonny, Benoni, Chenango Strawberry, McIntosh Red, Canada Red, Northern Spy, and Roxbury Russet, the two latter being set in the very richest of soil. These seven will nearly cover

the year and are sufficient for all practical purposes for the table as dessert.

For family cooking the Gravenstein, Rhode Island Greening, and Grimes' Golden Pippin are famous for pies in their several seasons, and the Center Sweet and Quince apple for baking. The latter is of no value for eating raw, while the Center apple is superb and juicy, if it can be kept from the maggot.

PREPARATION.

Having decided upon the varieties to plant for the orchard, and its location, the soil should be worked and enriched by previously cultivated crops, if the plan is known long enough beforehand to admit of thorough preparation. But so few farmers work on the long-digested plan covering a series of years that we shall speak of planting as though to be done in a grass field.

PLANTING.

If the trees have been ordered of well-known and responsible parties, and arrive in good order, nothing need be said of the treatment. When they arrive shrivelled and in bad order, trees which have dried badly may be recovered by burying root and branch in good, fine garden soil, for a day or two.

The holes should not be dug long before the trees arrive. Stakes for marking the rows and trees in a row should have been previously driven.

At the present price of real estate, and entertaining the idea of raising some grass and possibly some potatoes between the rows, we should make them wide apart, say 40 feet or more, with trees in the rows as near together as they may be without interlocking. Spade around the stake and remove the turf, if any, and place it by itself, and, instead of spading out soil that will hold together in coarse chunks unsuitable to be returned when setting, dig out the soil with a common hoe.

Unless this is done some fine loam should be kept along in a cart as the setting proceeds.

A blanket should be thrown over the trees in the wagon, to protect them from the atmosphere, unless the weather be rainy

or foggy, when more than one tree may be exposed at a time. Two hands are needed in tree setting.

Take the first tree from the helper and turn it carefully to inspect the root. Trim up all wounds made in digging, and pare the end of all roots of any size with a slanting cut of the knife. Cut back the top severely, as the tree will stand it when small better than to make an effort to grow three or four times as many buds as it can give sufficient vigor to the first year ; as the tree had better give a vigorous growth to a few buds which will form the proper foundation for its future top, than to push an inch or two of sickly growth to numerous shoots which will need to be removed, after being grown at the expense of the vitality of the tree during the year of its removal from the nursery.

Having properly prepared both root and top, set the tree in line in the hole, and if not sufficiently deep or wide to take the roots without cramping, make it so. Raise a little mound in the middle of the hole, to bring the tree to its proper height, and having sprinkled the root entire with a watering-pot, so that the fine earth will adhere, commence to pack the good soil under the crown, the most vital part, and later at the ends of of the roots, the helper giving the tree a slight motion like the dasher of the old-fashioned churn.

This firms the soil, and if the tree is of fair size and one has on rubber boots he may get into the hole and firm the soil while the helper throws in the last of the earth. If some well-rotted chip-dirt is used to finish it would be better than the sod, but if carefully inverted and packed, sods may be used, but a good mulch should be laid on top of all, which is safer than drowning with water when there are no leaves on the tree.

Thirty-five years ago one hundred and fifty trees were set, all of which commenced growing alike. Fifty of them were well mulched and all lived while fifteen died from the one hundred not mulched.

CULTURE.

Poultry in sufficient numbers to keep down every green thing, is the ideal treatment for growing fruit-trees. They hoe,

fertilize, and devour numerous insects. When larger, hogs and pigs do all that, and also devour the windfalls. Some protection is necessary to keep the hogs from the trunks of the trees. Three stakes, and some pieces of plank or slabs spiked to them, are sufficient and not expensive. In the absence of hens and hogs, clean culture with the plow and cultivators makes trees grow rapidly, but the expense is considerable if continued until the trees commence bearing. But if trees are in rows forty feet apart some crop can be raised between them while small, to pay the expense of cultivation.

ENEMIES.

Eternal vigilance is no more needed anywhere than in the apple orchard during the time of the tree life of which we speak. Snow may be stamped around their trunks to keep off mice, and some kind of bitter wash to keep off rabbits.

Tent caterpillars may be rubbed off from low trees with the hand when the brood first starts, or the eggs cut off on the twig, earlier. The borer must be watched for vigilantly, or new trees will have to be set to replace the original ones. A dark exudation of sap through a small blister in the bark near the ground indicates the deposit of eggs which produces this common enemy. He may be dug out from such places with a knife early in spring. The most apparent evidence of its visit is in the holes and sawdust left behind as evidence of its wickedness after it is transformed and has taken wings and gone to some other tree to deposit eggs for a like purpose. A. J. Downing recommends as a preventive a wash to be applied to the trunk, first removing some earth. To a gallon of soft soap add a pint of sulphur, and then mix with tobacco water until of the consistency of paint. This wash should be applied early in spring, and repeated until the hatching season has passed. It is offensive to the winged beetle or moth which lays the egg. He says that it may be injected into the holes, but we think anything done so late is like "locking the stable door after the horse is stolen." Spraying with the Bordeaux mixture to prevent the work of enemies that work on the blossom and small fruit is practised, and may be done to good advantage in orchards where the rows are long

and some distance apart. In such orchards two men can work a force-pump and hose with nozzle, the barrel of mixture being drawn on a wagon or cart.

Bee-keepers object to the use of poison while the blossom remains, and some states have passed laws regulating its use.

Bulletin No. 19, from the New Hampshire Experiment Station, treats on this subject, and gives the following formula, called the *Bordeaux Mixture:*

Blue vitriol (copper sulphate)	1 lb.
Fresh lime	1 lb.
Water	12 gals.
or	
Blue vitriol	4 lbs.
Fresh lime	4 lbs.
Water	50 gals. or 1 barrel.

Dissolve the blue vitriol in several gallons of water, say one fourth the quantity to be used, or it may first be dissolved in a smaller quantity of hot water and then several gallons of cold water added. Slake the lime and make a thin whitewash, then pour this slowly into the solution of vitriol, stirring thoroughly; then add water sufficient to make up the required quantity. Before using the mixture it should be strained through sacking, or a sieve of some kind with about a 1-16 inch mesh, to remove the coarser particles, which are liable to clog the nozzle of the pump.

Iron vessels should not be used in preparing any of these mixtures.

It is often desirable in spraying apple-trees to combine a remedy for both insects and fungi.

Paris green and London purple may be added to the Bordeaux mixture in the proportion of ¼ pound to 50 gallons.

The pump which will be found most generally useful, and which costs only a moderate sum, is a strong force-pump, working with a lever handle, which can be attached to the head or side of a barrel or cask. The pump should be provided with ten or twenty feet of hose and a suitable nozzle. One of the best forms of nozzle is that known as the Vermorel. It gives a

good spray, and is so constructed as to be readily freed when it happens to become clogged, as it may when using the Bordeaux mixture. This form of pump is usually provided with some means for keeping the contents of the barrel stirred up; but if not, or if it does not prove to be efficient, some other means will have to be employed, as the stirring is necessary in using the Bordeaux mixture, or mixtures containing Paris green or London purple. The pump should be of brass, or lined with brass, as the substances used in spraying are liable to corrode iron.

The barrel, with pump attached, can be mounted on a wheelbarrow, drag, or wagon. In spraying tall trees the nozzle and hose may be attached to a light pole. Spraying pumps may be obtained through hardware dealers, or directly of the manufacturers, who will send price-lists on application. The following firms make good pumps: W. B. Douglass, Middletown, Conn.; Field Force Pump Co., Lockport, N. Y.; Nixon Nozzle and Machine Co., Dayton, Ohio. A knapsack pump will cost about $14. A force-pump and barrel, as above described, will cost $10 to $12.

PRUNING.

To properly prune the apple requires first, a definite knowledge of what is to be accomplished by pruning; and secondly, a good idea of form, so that the tree will be in the desired shape when the job is finished.

The better early pruning and shaping has been attended to by the nurseryman and orchardist, the more satisfactory will be the result of pruning when the tree has attained considerable size.

If the tree has been neglected while making its formative growth, and inclines to throw up a secondary top from the middle of the tree, it should be allowed to take its own course, for if a secondary top of considerable size is removed, the chances are that the water will work its way into the heart of the tree, unless the wound is covered with grafting-wax, and kept tight enough to exclude all the air and moisture.

An ax, saw, or knife, can prune, but the thumb and finger-nail can do it better than either, if it gets there in season. The

longer pruning is neglected, the larger the tool needed, and the poorer the job. Dry limbs may be removed by a blow from the poll of an ax, and large limbs with a saw. But it is seldom necessary to do much violent work in an apple-tree unless it has been neglected.

The kind of pruning most resorted to that is injurious, is the removing of the spurs to young growing trees, so that the trunks may look well.

In order to get a good tapering trunk, with sufficient stamina to hold up the head of the tree when formed, these small sap-drawing spurs that grow on the side of, and shade the trunk of, small trees, should not be removed in a hurry for the sake of the looks. After these have performed their office they will come off, or they may be removed when the seedling is large enough to graft.

Another kind of pruning that is positively injurious, is attempting to make a well-formed tree out of one that is forked near the ground, after it is large enough to graft. Removing one half of the tree at this stage will communicate decay to half of the root, and introduce decay and probable ruin; whereas the habit of the tree's growth and development may be changed with the thumb and finger, a common pruning-knife, or a stiff-backed fine saw, according to the time when the change is attempted.

The removal of the middle of the tree after the tree is large enough to climb into, almost always makes it necessary to remove limbs from one to two inches in diameter, that are found growing upright in or near the centre, leaving wounds directly on top of the main branches. Such wounds, if made, should be covered with grafting-wax until grown over, as water will soak into the heart of the tree unless such a wound is covered, and that is the beginning of a rotten heart, which works decay and death. A wound an inch in diameter on the top of a leading limb will do more mischief, if left uncovered, than half a dozen of the same size on the under side of the limbs. Notwithstanding this, we would remove the middle from bearing trees, if it had not been done at the proper stage of their growth, but we would be careful to protect the wounds, as we regarded the long life and usefulness of the trees.

We have approached the subject of pruning with this criticism, and from that side of the subject, having seen so many mistakes of ourselves and others that we regard what not to do as one of the most important things to mention when treating this subject.

Paint or shellac may take the place of wax for covering wounds, and they are quite as effectual if the tree is never to be visited again with a view to continued care, but wax is best, if made so as to work pliable and thin. Neither wax nor paint should come quite to the bark of the wound, as paint will injure the bark in its first attempt to grow over the edge of the wound, and the same growing operation tends to push the wax out of place. No attempt should be made to correct the latter on a cold day, if discovered, as the wax will crack, and further expose the wound.

On porous and warm soils, where the tree starts the sap early in spring, care should be exercised that the sap does not start and run down the trunk of the tree or larger limb, as the case may be, and injure or poison the bark. On lands more naturally adapted, such as our rocky hillsides, there is no better season than late winter or early spring for pruning. This work can be profitably carried on when the snow is frozen in the morning, as scattering trees can then be easily reached and a ladder can be dragged on the crust. Moderate sized trees can be much easier climbed when the snow reaches two or three feet up the trunk than when the ground is bare; also the lower row of limbs can be reached with comfort without a ladder.

Limbs of less than an inch in diameter do not need any paint on the stubs, as we have proved by experience. They will nearly grow over in six months if taken off now, provided the tree is thrifty.

If the pruning is left until June there is great danger of stripping down the bark, which peels so readily at that season. We have sometimes pruned in June, and that time is theoretically right, but if practised, the limb should be cut twice: the first time ten or twelve inches from the trunk or larger limb from which it is taken, then if the bark strips a few inches as the limb falls no harm is done. The stub can then be safely sawn

again, close to the body of the tree or larger limb, as the case may be.

Rather than prune in autumn, and allow so many months of exposure of the wound before growth commences, we would recommend peeling off strips of bark from natural fruit limbs in grafted trees, discovered when picking; that they may thus be readily found and removed the following spring.

Now to approach the subject from the positive side. Dry limbs are said to draw as much from the life of the tree as green ones. We do not accept this, but do believe that rain water, soaking down, communicates disease to the heart of the tree. They should be removed for this reason, and their retention on the tree is very untidy, and unprofitable if the tree has any value whatever. Suckers at the ground are also quite as untidy, and often indicate the presence or work of the borer.

The growing habits of trees differ so much that judgment is needed in shaping. In a general way the shape of an inverted umbrella frame gives a good ideal shape, then in following up the work, if the tree inclines to an upward growth, work more in the centre of the tree, and if it inclines to the ground at the extremities, remove from the bottom. One thing which often makes pruning necessary is letting trees bear heavily without propping, as this practice induces the throwing up of numerous upright suckers from the tops of bearing limbs.

Moral teachers ask mainly for the first few years of the child life: so also, give me the first few years of the tree life to handle, and its future usefulness is insured, barring accidents. A man can make something of himself if he discovers neglect in his early training and works well afterwards. It is the same with trees, but the labor must be commensurate to the early neglect. As it is usually unwise for a man to make radical changes in his business after his character and habits are crystallized, the same is true with trees—too much change must not be attempted, but some things fundamental must be taken as they are, and our aims for improvement be confined to the growths of the present and coming years.

Remove limbs to let in the light. Remove limbs that are dead, or injured in picking.

Remove limbs that interlock, or lie too close above other bearing limbs. Remove low-lying limbs which interfere with haying tools or the horses' hames.

Also remove suckers from the top of bearing limbs and from around the roots of the trunk, by all means. Do not prune simply to hack and disfigure the tree, as it seems to an experienced orchardist many people must have done, judging by appearances of the tree when pruned.

PICKING AND MARKETING.

A whole paper might be devoted to this part of the subject, and here is where tact and skilled labor have their reward. Carelessness or neglect at this time interferes seriously with the profits of the business. Most farmers do not commence picking soon enough, if they have a large quantity to pick. The rule is to pick when the stem parts readily. If all could be picked in a day it would be right, but many fall to the ground if this is made the beginning time. We have never seen better apples in spring than those picked before completely colored. At picking time the convenience of long rows, sufficiently apart for the free passage of a wagon, will be apparent.

The wagon may be low and wide, with the rear wheels covered, so that bushel boxes may be piled on in large numbers. Ladders made peaked at the top are a great convenience, and two or three different lengths may be used. Rubber boots are better than leather boots with nails for the one who picks the middle of the tree.

Insist on very careful handling, and on dropping all apples too poor for good No. 2 on the ground to save handling.

Most orchardists prefer to sweat in piles two or more feet deep. If left in barrels until they sweat, two men should lift carefully and turn in a kind of crib, breast high, for ease in sorting. It pays to make a strictly No. 1 ; this makes the twos better, and gives the grower a good reputation. If you do business this way, put your card in every barrel of both ones and twos. Put a paper in the bottom of every barrel, and face with a good sample, blossom down, but do not face with *too good* a sample.

Give the barrel a dozen light shakes for every half barrel sorted, and finish level and a little more than full, so that a few apples will be spoiled when the head is pressed in with a screw-clamp.

Little can be said of when and where to market, except in a general way, as cold storage and the condition of the foreign market has much to do with prices from year to year.

When prices are remunerative sell early, as it means shrinkage and labor to store. For home convenience apples can be kept beyond their season in dry hard-wood sawdust. Sometimes this pays in selling to local dealers.

Even wrapping in separate papers prevents decay from spreading in the barrel.

However kept, they should be kept still and in a cool, moist cellar, and never moved when chilled.

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REPORT

OF THE

FISH AND GAME COMMISSIONERS

OF

NEW HAMPSHIRE

TO THE

GOVERNOR AND COUNCIL,

DECEMBER, 1893.

VOLUME I. . . . PART III.

CONCORD:
EDWARD N. PEARSON, PUBLIC PRINTER.
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CONCORD, N. H.

FISH AND GAME COMMISSION REPORT.

To His Excellency the Governor and the Honorable Council:

In compliance with the provision of the statutes of the state of New Hampshire, the fish and game commission, as far as practicable and possible, herewith submit the following report of their labors for the year ending December 1, 1893.

The commission, as now constituted, was organized July 28, 1893. Immediately following our organization an effort was made by us to obtain from ex-Commissioner Hodge all books, papers, memoranda, and data pertaining to the past work of the commission. We were unable to obtain anything from him, he claiming he had no books, papers, or figures belonging to the fish and game commission of New Hampshire, hence we are unable in this report to give any details of the work of the commission for the year 1893 prior to said 28th day of July.

At the last session of the legislature appropriations were made for the building of five new hatcheries. Three of these, Manchester, Sunapee, and Meredith, have been built. The others, at New Durham and North Conway, will be erected in the spring.

Arrangements have been made which will insure the building of proper fishways at Garvin's and Sewall's falls on the Merrimack river within the next six months.

We have met with excellent success in procuring spawn

for the various stations, as will appear in the following reports for each station:

COLEBROOK STATION.

This station, the most northerly in the state, is a hatchery built for the exclusive purpose of the propagation of brook trout. Provision should have been made at the time of its erection for the keeping on hand at the hatchery a sufficient number of parent fish to supply the plant with the requisite number of spawn from year to year. It was thought by the then existing commission that spawn could be easily procured from the various ponds and lakes in the vicinity of this station.

But experience has shown that the obtaining of spawn from these waters in the fall of the year, after they have been persistently fished, commencing with ice fishing the 15th of April and following through the entire season to the 15th of September, by local sportsmen and summer tourists, is a difficult and expensive operation. Suitable parent fish are very scarce, and hard to obtain by reason of the fact that such immense quantities of them have been captured and taken away during the open season. Believing that the only practical method of procuring spawn for our brook trout hatcheries is by maintaining suitable reservoirs and keeping them stocked with a sufficient number of parent trout for the supply of spawn for the hatcheries, we have begun operations in that line at Colebrook.

We have built and enclosed in a rough, suitable building several tanks, in which we have confined 1,250 parent trout, which is probably about one-eighth the number required for stocking the present building to its fullest capacity. We have laid down here 250,000 brook trout eggs of the finest varieties, taken from waters in this immediate vicinity.

This hatchery is under the management of Albert C. Wallace of Colebrook, who is an enthusiast in fish culture, and in every way qualified for the trust reposed in him.

PLYMOUTH STATION.

Owing to the sickness of Superintendent Hodge no effort was made to take migratory salmon from the Pemigewasset river at Livermore Falls the past season. We have laid down in this hatchery 700,000 brook-trout eggs, one half of which belong to Massachusetts. An earnest effort must speedily be made to replenish the supply of parent trout at this station, as quite a large number have died, during the past season, of old age, and quite a number have been killed by mink.

This plant has been substantially improved the past year by the addition of a permanent fence around the ponds and the re-building of some of the tanks. By reason of Superintendent Hodge's illness this station has for some time practically been under the management of D. H. McLinn, and has been well cared for.

ASHLAND STATION.

This station is being devoted to the propagation of lake trout and land-locked salmon. We have laid down at present a few thousand salmon eggs, and 450,000 lake trout eggs, most of the latter having been taken from Newfound lake.

Frank L. Hughes has charge of this plant, and everything pertaining to it is in good condition.

MEREDITH STATION.

This station is a new one, having been erected this season. It is built near the head-waters of a cold brook flowing through a ravine, which makes it practicable, at a reason-

able expense, to create ponds suitable for the maintenance of parent trout.

One such pond has already been made, and others will be added when necessary. This plant is peculiarly adapted for the propagation of brook trout and will be used for that purpose exclusively as soon as we can procure the requisite number of parent fish to supply the hatchery with spawn. At present the house is substantially filled with spawn of the lake trout taken from Newfound lake, which are being cared for by J. S. Robinson.

LACONIA STATION.

Laconia, with the exception of the joint hatchery at Plymouth, has the largest capacity of any fish hatching house in the state. It is devoted entirely to hatching lake trout eggs, and is filled with the same to its utmost capacity. It will be necessary to remove at least a quarter of a million of eggs as soon as eyed, that the balance may be successfully hatched and cared for. The surplus will be transferred to the Colebrook station, hatched, and distributed among the lakes in upper Coös. A portion of the eggs at this station were obtained from Newfound lake, and the balance taken from Winnisquam bay.

O. H. Daniel is in charge, and has proved himself efficient in the discharge of his duties.

BRISTOL STATION.

Seventy-five thousand land-locked salmon eggs and over three million lake trout eggs were taken at this station this season. The hatchery was filled to its utmost capacity, and the balance transferred to Manchester, Keene, Laconia, Ashland, and Meredith. The weather being favorable, there

is no limit to the amount of spawn that can be taken here. The present house is, in our opinion, in a very poor location, on account of the uncertainty of the water-supply.

The water is taken from the lake in pipes, and in order to get a sufficient fall at low water the house is in danger of being flooded when the lake is high. With the extra facilities offered at this lake for procuring the spawn, we think it would be advisable to change the location of and enlarge this house. A cabin has been put up at Pike's point, for the better comfort of the men employed in procuring the parent fish. The work is done in the latter part of October and the first part of November, when the weather is apt to be quite cold, and the tent which had formerly been used was insufficient protection to those employed in the arduous labor of taking spawn at that season of the year.

The spawn were taken by George H. Fowler, assisted by C. N. Drake and E. T. Pike. It would be difficult to find a trio of more efficient and willing men for this labor than the above.

D. R. Sleeper is in charge of the hatchery, and at times the work is made very difficult by the extreme low water, when it is necessary to put the hatching troughs on the floor, and at other times by the extreme high water, when it floods the floor of the house to a depth of from three to four feet.

SUNAPEE STATION.

Professor John D. Quackenbos of New York has done much to promote the success of the work at the Sunapee station. For the last ten years he has given the use of his land to the state and placed at her disposal the valuable privileges of the two Pike brooks, including two miles

of stream fishing in Soo-Nipi-Side Park, with a site on the lake shore for the station of the New Hampshire Fish Commission.

Two years ago, finding that speculators were about to purchase and cut the forests that protect the upper waters of these two brooks, the nurseries of the salmon and trout fly, and aware that such deforestation implied a fatal blow to fish culture at Sunapee lake, Dr. Quackenbos, after the averred powerlessness of Commissioner Hodge to interfere, himself bought the menaced tract of 100 acres and possessed the state of its control, exclusively for fish raising and fish hatching. As a consequence infinite possibilities in the line of fish propagation have been permanently secured for the good of the angling public. The brooks' channels run with crystal water throughout the summer, and magnificent trees for miles interlock their branches over the streams—a proud monument to the liberality of a gentleman, whose name should be known and respected by the sportsmen of our state.

Dr. Quackenbos is to be remembered, also, for his importation and gift to the Fish Commission in 1887 of 30,000 Loch Leven trout, to be placed in the public waters of the Sunapee system, and for his stocking the Sunapee region in 1892 with West Virginia quail.

His last action is in keeping with his character. The lease made by him to the state in 1883 having expired, in September it became necessary for the Commission to renew, in order to continue fishing operations at the Pike brooks. This we have done, greatly to the advantage of the state as well as to the satisfaction of Dr. Quackenbos and all his friends who are property owners or lessees in Soo-Nipi-Side Park. The lease has been renewed for ten

years with the privilege of a renewal for a third term, but in consideration of such renewal by the commission and the continuance of fish cultural operations on the land so leased.

Dr. Quackenbos has relinquished for the whole term $49 of each annual rental of $50, due under the conditions of the original writing, thereby virtually presenting the state with $490 for permanent improvements on the leased property. Under the authorization of the governor and council this sum has already been expended in helping to erect and equip the hatchery building in Soo-Nipi-Side Park. At the last session of the legislature an appropriation of $500 was made for the enlargement and improvement of the Sunapee plant. Upon examination we were satisfied that any money expended in repairs on the old building would be virtually thrown away. The action of Dr. Quackenbos, together with that of the governor and council, enabled us to erect a new hatchery building at this point, which is perfect in all its appointments and a credit to the state.

We were fortunate in securing the services of A. J. Cheney, and his success in procuring breeding fish shows the wisdom of the choice. More of all kinds of parent fish have been taken here this year than in any previous season. Of the aureolus more than twice the number were taken, 148 having been procured in one day. Owing to the fact that a large per cent. of the latter were male fish, the amount of spawn taken was but little over twice that laid down last year, being 105,000 last year and 218,000 this year.

Our labors at this station have been very satisfactory, and if we can continue the increase two seasons more, the hatchery will be filled to its utmost capacity. The total number of eggs laid down here, including the brook trout,

aureolus, and land-locked salmon, is 570,000, of which C. E. Davis has charge.

MANCHESTER STATION.

This new hatchery, completed October 1, is second to none in the state. It is located on the site formerly occupied by Hon. Perry H. Dow's private hatchery. Mr. Dow has kindly donated to the state the use of his fish hatching house and tank. We have constructed a dam across the stream which furnishes the water supply for the hatching house, thereby creating a pond of sufficient capacity for the keeping of parent fish. Four hundred and fifty thousand lake trout spawn from Newfound lake are laid down here, and 100,000 eyed brook trout have been contracted for.

Local sportsmen have contributed for a certain portion of the eggs contracted for, which we are to hatch out and return to them, they having agreed to place the fry in the public waters of this state. G. H. Bell is in charge of the work, and it is being faithfully performed.

KEENE STATION.

One hundred and fifty thousand lake trout spawn from Newfound lake were brought here in the fall, and are doing well. This proves to our satisfaction that eggs just taken from the fish can be successfully transported, if carefully handled, to any reasonable distance. Having no parent fish at this station, and being unable to procure them in this immediate vicinity, we have contracted for 100,000 eyed brook trout spawn, which will be laid down later.

The best interests of this section of the state demand that a liberal appropriation be made for the purpose of procuring parent brook trout and the building of suitable tanks or

reservoirs, in which to keep the same in sufficient numbers to supply this hatchery with spawn from year to year to its utmost capacity. E. E. Cone has charge of the plant.

We desire in conclusion to express our thanks to the different railroad companies for the courtesies they have extended us; also to the Woodsum Steamboat Company. We also thank your honorable body for the hearty support you have given us.

All of which is respectfully submitted:

WILLIAM H. SHURTLEFF,
W. H. GRIFFIN,
N. WENTWORTH,
Fish and Game Commissioners.

December 1, 1893.

LIST OF FISH COMMISSIONERS OF UNITED STATES AND CANADA.

THE UNITED STATES.

Col. Marshall McDonald, commissioner, Washington, D. C.
Capt. J. W. Collins, assistant in charge of fisheries division.
Richard Ratburn, assistant in charge of scientific inquiry.

DOMINION OF CANADA.

Hon. C. H. Tupper, minister of marine and fisheries, Ottawa.
Hon. John Tilton, deputy minister, Ottawa.
S. P. Bauset, chief clerk, Ottawa.
Samuel Wilmot, superintendent of fish culture, Ottawa.

NEWFOUNDLAND.

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M. Harvey, secretary, St. Johns.
Adolph Neilson, superintendent of fisheries, St. Johns.

ARIZONA.

Edward Schwartz, Phœnix.

SOUTH CAROLINA.

A. W. Jones, Beaufort.

COLORADO.

Wm. R. Callicotte, Denver.

CONNECTICUT.

James A. Bill, Bill Hill.
Samuel N. Bronson, Hartford.
Richard E. Follett, Willimantic.

CALIFORNIA.

Joseph D. Redding, San Francisco.
Hugh L. MacNeil, Los Angeles.
Wm. C. Murdock, secretary, San Francisco.

DELAWARE.

James A. Mulligan, Delaware City.
I. M. Mills, president Delaware Game Protective Association, Clayton.

FLORIDA.

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M. Mosely, Palatka.
L. H. Sellars, Pensacola.

IOWA.

T. J. Grigg, Spirit Lake.

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Geo. N. Longford, Mason county.
Richard Roe, St. Clair county.
O. D. Sekler, Kane county.
Chas. H. Blown, game warden, Chicago.

NEW JERSEY.

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Robert D. Foote, Morristown.
Parker W. Page, Summit.

KANSAS.

J. W. Waimpler, Brazilton.

MAINE.

Thos. N. Wentworth.
Henry O. Stanley, inland fisheries and game, Dixfield.
E. W. Gould, sea and shore fisheries, Thomaston.

MASSACHUSETTS.

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I. C. Young, Wellfleet.
E. H. Lathrop, Springfield.

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William Bird, game warden, Fairmont.
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A. F. Ferris, Brainerd.

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MICHIGAN.

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Charles S. Hampton, Petasky.

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Richard T. Browning, Oakland.
No game commission.

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Committee of Shell Fisheries.

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Calvert Spensley, secretary and treasurer, Mineral Point.
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Robert Hamilton, Greenwich.

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Chas. C. Warren, Waterbury.

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Dr. I. T. Wilkins, Jr., Bridgeton.

WEST VIRGINIA.

Felix J. Baxter, Sutton.
C. S. White, Romney.
N. C. Prickett, fish commissioner, Ravenswood.

WASHINGTON.

Hon. James Crawford, game warden, Vancouver.
Hon. S. F. Sherwood, Collville.

WYOMING.

Gustave Schnitger, Laramie.

REPORTS

OF THE

WARDEN AND INSPECTORS

OF THE

STATE PRISON

AT

CONCORD, NEW HAMPSHIRE,

TOGETHER WITH THE

REPORTS OF THE CHAPLAIN AND PHYSICIAN,

DECEMBER 1, 1893.

VOLUME I. . . . PART IV.

CONCORD:
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1893.

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DEPUTY WARDEN.

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PHYSICIAN.

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NIGHT WATCHMEN.

NATT WIGGIN, *Shop.*
GEORGE W. TRICKEY, *Hall.*

MATRON.

Mrs. SADIE COBURN.

WARDEN'S REPORT.

CONCORD, December 1, 1893.

To His Excellency the Governor and the Honorable Council:

GENTLEMEN: I respectfully submit the following report of the affairs of the prison for the year ending November 30, 1893.

There are now in prison 169 males and 4 females; total, 173. This is a larger number than we have had since the new prison has been occupied.

The health of the convicts has been good, but two deaths occurring during the year from natural causes, and one of these was from apoplexy, he dying within forty-eight hours of his arrival. On the 16th of last May, Frank C. Almy was executed for the murder of Christie C. Warden. The usual Sunday services have been regularly held, which have been of interest, and, I trust, of profit to the inmates.

The earnings from all sources have been $22,309.48. The expenditures have been $22,616.16, leaving a balance against the prison of $306.68.

It was found necessary to make extensive repairs on the shop boilers during the year. This forced a shut-down of the works by which the prison lost on labor of convicts about $1,000. Except for this, the prison would have shown a surplus of earnings over expenditures.

A building, 40x72 feet, with cellar under a part of it, has been built during the year, which gives us much needed cellar and storage room. This was paid for out of a special appropriation, as was the wall on street line below the "Tenement house." The cost of the building and wall was about $2,000.

To the officers of the prison I am indebted for the faithful manner in which they have discharged their several duties in maintaining a system of discipline which, I believe, results in good to all concerned.

Accept my thanks for the kindness I have received at your hand.

GEO. W. COLBATH,
Warden.

CHAPLAIN'S REPORT.

To His Excellency the Governor and the Honorable Council:

GENTLEMEN: In compliance with the laws of the state I herewith submit my yearly report as chaplain of the state prison.

The usual quiet and good order of our institution has prevailed during the year, attributable to the kind yet firm administration of the rules by which the prison is governed.

To say that I am anxious for the moral and religious elevation of the men confined in the prison but poorly expresses my interest in them. I sincerely believe in the reformation of many of them if properly and kindly approached, and I have directed my labors especially to that end. When a man is committed to prison the people generally believe and act as if his reformation was impossible, and the prisoner well knowing the drift of public sentiment admits the justice of the conclusion and decides to fulfil that prophesied of him. It is one of the most difficult things with which I have to contend. It is my chief work in my personal visitations to overcome these unhappy conclusions. I think work is here the most important and profitable, inspiring hope of a better condition, especially a belief in Gospel recovery for the erring and sinful.

The chapel services are interesting, enjoyed by the convicts, and, I trust, in many cases made profitable.

The library is in a good condition. There has been the usual loss by constant use. Many of these I have replaced by new

copies. There has been an addition of 197 volumes during the year and the rebinding of 100 volumes. I judge the books are as well used as those of any public library with similar use.

I herewith signify my thanks for the courtesy and aid rendered by the prison officials.

Respectfully,

E. R. WILKINS,

Chaplain.

TREASURER'S REPORT.

To His Excellency the Governor and the Honorable Council:

GENTLEMEN: I have the honor respectfully to submit the following report of the financial transactions on account of the New Hampshire State Prison for the fiscal year ending November 30, 1893.

RECEIPTS.

The Geo. T. Comins Co. (convict labor, etc.)	$20,832.38
Subsistence (board of officers)	3,616.16
Incidentals	133.81
Visitors' fees	358.85
Rent	350.00
Water for shops (as per meter)	349.00
Board of United States prisoners	148.60
State treasurer, deficiency, current expenses	1,526.33
Total receipts	$27,315.13

DISBURSEMENTS.

Overseers, including expenses of prison committee of honorable council, from January 1, 1892, to January 1, 1893	$11,119.52
Incidentals	1,014.64
Carried forward	$12,134.16

Brought forward	$12,134.16
Subsistence	7,372.38
Deputy warden	1,200.00
Hospital supplies	314.31
Funeral expenses	26.00
Clothing	1,570.52
Discharged convicts	162.00
Physician	500 00
Repairs	365.71
Light, fuel, and water	3,347.61
Furniture	322.44
Total disbursements	$27,315.13

The following are the earnings and expenses of the institution for the year ending November 30, 1893:

EARNINGS.

Labor of convicts from December 1, 1892, to December 1, 1893	$19,902.08
Visitors' fees	358.85
Rent	350.00
Board United States prisoners	148.60
Gain on inventory	1,549.95
	$22,309.48

EXPENSES.

Deputy warden's salary	$1,200.00
Physician	500.00
Carried forward	$1,700.00

Brought forward	$1,700.00
Overseers (net)	10,519.52
Clothing	1,570.52
Discharged convicts	162.00
Furniture	322.44
Subsistence (net)	3,756.22
Light, fuel, and water (net)	2,998.61
Hospital supplies	314.31
Funeral expenses	26.00
Repairs	365.71
Incidentals (net)	880.83
Total expenses for the year	$22,616.16
Excess of expenses over earnings	306.68
	$22,309.48

FINANCIAL CONDITION.

Assets, December 1, 1892.

Provisions, etc., on hand, as per inventory	$3,305.10
Due from contractor for convict labor and sundry items	1,651.30
Total assets, December 1, 1892	$4,956.40

ASSETS, DECEMBER 1, 1893.

Provisions, etc., on hand, as per inventory	$4,855.05
Due from contractor for convict labor and sundry items	1,321.00
Total assets, December 1, 1893	$6,176.05
Balance drawn from state treasury	1,526.33
Increase in assets	1,219.65
Net loss for year	$306.68

The claim against the contractor, reported above, consists of the following items:

Convict labor for November, 1893	$1,271.00
Extra overseer	50.00
	$1,321.00

SOLON A. CARTER,
Treasurer of State Prison.

PHYSICIAN'S REPORT.

To His Excellency the Governor and the Honorable Council:

GENTLEMEN: I respectfully submit to your notice, my annual report of the sanitary condition of the state prison and the health of its inmates.

No epidemic has occurred during the year; and it is again gratifying that the hospital record shows no sickness which could in any degree be attributed to sanitary defects in the prison, lack of proper care, or diet; and that the general health of the prisoners continues excellent.

I am under obligation to all of the officers for the assistance they have uniformly rendered me in the discharge of my duties.

We have had but two deaths from natural causes. The record is appended.

May 16, 1893, Frank C. Almy; executed.

August 26, 1893, Harry T. Ballou; consumption.

November 15, 1893, Elden Eastman; apoplexy.

EDGAR A. CLARK,

Physician,

December 1, 1893.

STATISTICS.

Whole number in prison December 1, 1892	157
Received from courts from December 1, 1892, to November 30, 1893	66
Whole number in prison during year	223
Whole number discharged during year, viz.:	
Pardoned	4
Discharged	42
Died	2
Transferred to asylum for insane	1
Executed	1
	50
Whole number in prison November 30, 1892, viz.:	
Males	169
Females	4
	173

AGE WHEN COMMITTED.

Under 20 years	18
Between 20 and 30 years	86
Between 30 and 40 years	38
Between 40 and 50 years	18
Over 50 years	13
	173

SOCIAL RELATIONS.

Married	55
Single	118
	173

HABITS OF LIFE.

Claim to be temperate	65
Admit themselves to be intemperate	108
	173

EDUCATION.

Read and write	152
Read only	3
Neither	18
	173

CRIMES COMMITTED.

Murder, second degree	11
Manslaughter	6
Attempt to kill	4
Rape	9
Attempt to rape	8
Arson	2
Burglary	35
Stealing	30
Forgery	3
Breaking and entering	43
Stealing horse	9
False pretences	3
Tramp	2
Adultery	3
Robbery	3
Mayhem	1
Bigamy	2
	173

NATIVES OF THE FOLLOWING COUNTRIES.

United States	129
Ireland	8

England	6
Canada	24
Germany	1
Scotland	1
Prussia	1
Italy	2
Poland	1
	173

LENGTH OF SENTENCE.

30 years	5
25 years	1
20 years	8
15 years	6
10 years	6
8 years	6
7 years	8
6 years	1
5 years	19
4 years	18
3 years	32
2½ years	2
2 years	40
1½ years	5
1 year, 1 day	16
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REGISTERED CONVICTS.

REGISTER OF CONVICTS IN PRISON DECEMBER 1, 1893.

NAMES.	Ages.	Where born.	What county convicted in.	Crime.	When committed.	Sentence. Years.	Months.	Days.
Charles Stevens	34	Loudon	Merrimack	Rape	April, 1875	30	....	....
Joseph H. Otis	26	Strafford	Strafford	Murder, second degree	Sept., 1880	30	....	....
John H. Elkins	22	Kingston	Rockingham.	Murder, second degree	Nov., 1880	20	....	....
Joseph Mills	41	New York	Merrimack	Rape	Oct., 1887	20	....	....
George Douran	18	Canada	Hillsborough	Burglary	March, 1888	10	....	....
Joseph Rockfore	24	Canada	Hillsborough	Burglary	March, 1888	10	....	....
Bert W. Richards	25	Augusta, Me.	Rockingham.	Two indictments: Polygamy, three years; breaking and stealing, five years	April, 1888	8	....	....
Charles A. Alexander	24	Manchester	Hillsborough	Rape	Sept., 1888	15	....	....
Thomas Collins	25	Lewiston, Me.	Coös	Burglary	Oct., 1888	6	....	....
Frank S. Ballou	19	Hill	Merrimack	Rape	April, 1889	20	....	....
Frank S. Loverin	17	Sanbornton	Merrimack	Rape	April, 1889	20	....	....
Charles W. Varney	31	Barnstead	Belknap	Rape	April, 1889	25	....	....
Holton E. Wells	41	Holderness	Strafford	Murder, second degree	June 18, 1889	10	....	....
Fred Elvin	39	England	Merrimack	Attempt to rape	Oct. 7, 1889	7	....	....
Levi H. Richardson	29	Denmark, Me.	Carroll	Attempt to rape	Oct. 31, 1889	7	....	....
Charles E. McKenzie	19	Canada	Hillsborough	Breaking, entering, and stealing	Mar. 25, 1890	5	....	....
Sylvanus W. Hill	47	New Hampshire	Grafton	Murder, second degree	Mar. 27, 1890	30	....	....
Joseph Little	21	Michigan	Hillsborough	Burglary	Mar. 31, 1890	15	....	....
Napoleon Normando	28	Canada	Hillsborough	Rape	Mar. 31, 1890	10	....	....
Edward Pare, alias Geo. Bowland	37	Canada	Cheshire	Burglary	April 3, 1890	5	....	....
Nathan Scott	52	Vermont	Merrimack	Rape	April 16, 1890	20	....	....
Madison G. Colby	39	Franklin	Merrimack	Murder, second degree	April 24, 1890	30	....	....
Patrick Dunn	28	Maine	Rockingham.	Stealing	April 24, 1890	4	....	....
John McCarty	48	Hartford, Conn.	Rockingham.	Breaking, entering, and stealing	April 24, 1890	4	....	....
Silas Conroy, alias John Banks	29	Massachusetts	Rockingham.	Breaking and entering	April 24, 1890	4	....	....
Andrew J. Davis	54	Exeter	Rockingham.	Manslaughter, first degree	April 24, 1890	20	....	....
Peter Sullivan	43	Ireland	Hillsborough	Stealing horse	Sept. 22, 1890	5	....	....
John Gorman	25	Vermont	Hillsborough	Stealing	Sept. 22, 1890	5	....	....

John E. Hanscomb	45	Maine	Hillsborough	Arson	Sept. 25, 1890	10	....
Frank Hardy	40	Vermont	Hillsborough	Attempt to rape	Sept. 29, 1890	7	....
John J. Horne	60	New Hampshire	Carroll	Attempt to kill	Nov. 15, 1890	7	....
Frank Talbot	42	New Hampshire	Grafton	Attempt to kill	Nov. 18, 1890	5	....
Walter H. Shaw	25	New Hampshire	Grafton	Murder, second degree	Nov. 18, 1890	15	....
Joseph Myers	29	Germany	Rockingham.	Breaking and entering	Nov. 21, 1890	4	....
Charles Cross	37	France	Strafford	Manslaughter	Mar. 7, 1891	15	....
Frank Nelson	25	New Hampshire	Grafton	Burglary	Mar. 20, 1891	4	....
Charles Scales	50	New Hampshire	Merrimack	Breaking and entering	April 22, 1891	3	....
Frank Hart	38	New Hampshire	Merrimack	Burglary: 2 indictments, seven years and eight years	April 24, 1891	15	....
Daniel Murphy	52	Ireland	Rockingham.	Murder, second degree	May 5, 1891	20	....
Frank Woods	33	Massachusetts	Rockingham.	Murder, second degree	May 5, 1891	7	....
Lucy Reed	54	Massachusetts	Rockingham.	Accessory to murder, sec'nd d'gree	May 5, 1891	5	....
Hattie Beckman	23	Massachusetts	Rockingham.	Manslaughter, second degree	May 5, 1891	5	....
John Abare	18	New Hampshire	Hillsborough	Robbery	Sept. 21, 1891	5	....
Oliver Rivers	36	Canada	Hillsborough	Stealing	Sept. 28, 1891	4	....
Henry J. La Casse	18	New Hampshire	Hillsborough	Attempt to rape	Oct. 1, 1891	4	....
John Dugan	26	Maine	Belknap	Stealing	Oct. 2, 1891	3	....
Eugene Brigham	20	Massachusetts	Belknap	Stealing horse	Oct. 2, 1891	3	....
Warren L. Demeritt	25	New Hampshire	Strafford	Stealing horse	Oct. 16, 1891	3	6 ....
John Moulton	33	Maine	Strafford	Manslaughter, second degree	Oct. 16, 1891	2	6 ....
Benjamin F. Williams	22	Massachusetts	Strafford	Burglary	Oct. 16, 1891	4	....
George Bradford	33	Scotland	Strafford	Burglary	Oct. 16, 1891	2	6 ....
John Campbell	25	Maine	Strafford	Breaking and entering	Oct. 16, 1891	3	....
Wm. E. Robinson	23	New Hampshire	Merrimack	Stealing horse	Oct. 20, 1891	4	....
Wm. M. Nason	35	Maine	Carroll	Attempt to rape	Oct. 30, 1891	5	....
Michael Mullen	36	New Hampshire	Hillsborough	Attempt to rape	Oct. 31, 1891	3	....
Elmon H. Williams	48	Vermont	Coös	Forgery	Nov. 12, 1891	5	6 ....
Uriah C. Rowen	58	New Hampshire	Grafton	Arson	Nov. 21, 1891	10	....
Joseph Markee	21	Canada	Coös	Burglary	Feb. 9, 1892	4	....
Atis Ross	35	Maine	Coös	Burglary	Feb. 9, 1892	4	....
Henry Smith	30	Vermont	Coös	Burglary	Feb. 9, 1892	5	....
James McDonald	25	Nova Scotia	Coös	Stealing	Feb. 9, 1892	4	....
Eugene Tatro	19	New York	Strafford	Burglary	Mar. 3, 1892	2	....
James McCabe	25	New Hampshire	Strafford	Burglary	Mar. 3, 1892	3	....
Walter Russell	22	Maine	Strafford	Stealing	Mar. 3, 1892	2	....
Fred Munroe	19	New Hampshire	Strafford	Stealing	Mar. 3, 1892	3	....
Michael Morgan	21	Ireland	Strafford	Burglary	Mar. 3, 1892	2	....
John Murphy	24	New Hampshire	Grafton	Forgery	Mar. 17, 1892	2	....
Margaret Harrington	48	Ireland	Hillsborough	Breaking and entering	Mar. 23, 1892	3	....
Daniel P. Gage	23	Massachusetts	Hillsborough	Burglary	Mar. 23, 1892	5	....
Daniel Lane	40	Massachusetts	Hillsborough	Breaking and entering	Mar. 23, 1892	2	....
Frank Perry	25	Massachusetts	Hillsborough	Stealing	Mar. 23, 1892	2	....

REGISTER OF CONVICTS IN PRISON DECEMBER 1, 1893.—*Continued.*

NAMES.	Ages.	Where born.	What county committed in.	Crime.	When committed.	Sentence.		
						Years.	Months.	Days.
George Riley	23	England	Hillsborough	Breaking and entering	Mar. 26, 1892	2	....	....
Albert McDermott	23	Massachusetts	Hillsborough	Breaking and entering	Mar. 26, 1892	3	....	...
John Flint	37	New Hampshire.	Hillsborough	Breaking and entering	Mar. 26, 1892	2	....	....
Harry Heath	19	New Hampshire.	Merrimack	Breaking and entering	April 9, 1892	3	....	....
John Brunell	41	Vermont	Cheshire	Murder, second degree	April 14, 1892	30	....	....
Edward Kent	34	Maine	Rockingham.	Stealing	April 27, 1892	2	....	....
Thomas Gay	25	Canada	Rockingham.	Burglary	April 27, 1892	2	....	....
William Colby	32	New Hampshire.	Carroll	Assault, with intent to kill	May 2, 1892	2	....	....
Thomas Sheehan	20	Massachusetts	Ref'rm Sch'ol	Stealing	May 26, 1892	1	9	....
Frank Willis	20	New Hampshire.	Ref'rm Sch'ol	Breaking and entering	May 26, 1892	1	8	....
Lafayette M. Goward	34	New Hampshire.	Hillsborough	Breaking and entering	Sept. 28, 1892	1	6	....
William Williams	22	New Hampshire.	Hillsborough	Stealing	Sept. 28, 1892	2	....	....
John Jacobs	20	Massachusetts	Hillsborough	Burglary	Sept. 28, 1892	2	....	....
Orris Oakes	55	Maine	Hillsborough	Stealing horse	Sept. 28, 1892	2	....	....
Stephen B. Knight	21	New Hampshire.	Hillsborough	Burglary	Sept. 28, 1892	4	....	....
Robert H. Pope	25	Massachusetts	Belknap	Stealing	Oct. 4, 1892	5	....	....
Kate Harris	27	Ireland	Hillsborough	Stealing	Oct. 4, 1892	2	....	....
George A. Bridges	27	Massachusetts	Hillsborough	False pretences	Oct. 4, 1892	2	....	....
Guiseppe Mancera	33	Italy	Belknap	Murder, second degree	Oct. 6, 1892	20	....	....
Charles H. Wade	26	New Hampshire.	Carroll	Robbery	Oct. 21, 1892	28	....	....
Joseph Quinlan	25	New Hampshire.	Strafford	Burglary	Oct. 22, 1892	2	....	....
Silva Tatro	18	New Hampshire.	Strafford	Burglary	Oct. 22, 1892	2	....	....
Willie Wilkinson	19	New Hampshire.	Strafford	Attempt to rape	Oct. 22, 1892	3	....	....
Michael Lorenzo, alias Mike Laurence	26	Italy	Strafford	Attempt to rape	Oct. 22, 1892	7	....	....
George F. Whitehouse	32	New Hampshire.	Carroll	Attempt to rape	Oct. 22, 1892	8	....	....
F. H. Haskins	30	Vermont	Cheshire	Breaking and entering and assault	Oct. 25, 1892	2	....	....
Fred Sincere, alias Fred Clough	24	Canada	Hillsborough	Stealing	Nov. 14, 1892	3	....	....
Fred A. Davis	34	Vermont	Grafton	Adultery	Nov. 14, 1892	3	....	....
Frank Lamson	34	Canada	Rockingham.	Burglary	Nov. 21, 1892	3	....	....

Frank Reynolds	41	Connecticut	Rockingham.	Burglary	Nov. 21, 1892	4	....	....
Charles E. Watson	62	New Hampshire.	Rockingham.	Manslaughter	Nov. 21, 1892	5	....	....
Joseph Smith	22	Maine	Rockingham.	Burglary	Nov. 21, 1892	3	....	....
Henry Hoyt	26	Canada	Rockingham.	Adultery	Nov. 21, 1892	2	....	....
William A. Jackson	25	Massachusetts	Rockingham.	False pretences	Nov. 21, 1892	2	....	....
Charles E. Brown	37	Vermont	Coös	Stealing horse	Nov. 21, 1892	3	....	....
Peter E. Cady	29	Ireland	Coös	Stealing horse	Nov. 21, 1892	3	....	....
Maurice Higgins	22	Canada	Coös	Stealing horse	Nov. 21, 1892	3	....	....
Samuel Green	46	Maine	U. S. Court	False pretences	Dec. 22, 1892	2	....	....
Thomas Wilson	30	Maine	Coös	Stealing	Feb. 14, 1893	1	....	1
Thomas Ferguson	24	Pennsylvania	Strafford	Breaking and entering	Mar. 11, 1893	4	....	....
John Hughes, alias Lawrence Billy	25	New Jersey	Strafford	Burglary	Mar. 11, 1893	5	....	....
James Murphy	24	New Hampshire.	Strafford	Breaking and entering	Mar. 11, 1893	2	....	....
James Hurley	18	Massachusetts	Strafford	Breaking and entering	Mar. 11, 1893	2	....	....
Albert Duval	22	Canada	Strafford	Breaking and entering	Mar. 11, 1893	1	....	1
Charles Johnson	19	Massachusetts	Strafford	Breaking and entering	Mar. 11, 1893	2	....	....
William H. Allen	29	Scotland	Strafford	Stealing	Mar. 11, 1893	3	....	....
Willie Wentworth	21	New Hampshire.	Strafford	Breaking and entering	Mar. 11, 1893	2	....	....
David Robinson	59	Canada	Strafford	Breaking and entering	Mar. 11, 1893	3	....	....
Thomas I. Killehea	22	Vermont	Hillsborough	Adultery	April 4, 1893	1	....	1
John Schenlee, alias John Stanton	22	New Hampshire.	Hillsborough	Breaking and entering	April 4, 1893	1	....	1
Edward Capron	39	New Jersey	Hillsborough	Tramp	April 4, 1893	1	....	1
George True	35	New Hampshire.	Merrimack	Stealing	April 10, 1893	1	....	1
Herbert Eaton	32	New Hampshire.	Merrimack	Stealing	April 11, 1893	1	....	1
Albert Labarn	26	Canada	Merrimack	Breaking and entering	April 11, 1893	1	....	1
Patrick Conners	23	Ireland	Hillsborough	Breaking and entering	April 12, 1893	2	....	....
Edward Burns	28	England	Hillsborough	Breaking and entering	April 12, 1893	2	....	....
John Shea	29	New Hampshire.	Hillsborough	Stealing	April 12, 1893	1	6	....
Martin Welch	34	England	Hillsborough	Breaking and entering	April 12, 1893	3	....	....
Felix Bushey	22	Canada	Hillsborough	Breaking and entering	April 12, 1893	3	....	....
Thomas Nolan	29	Ireland	Hillsborough	Breaking and entering	April 14, 1893	2	....	....
Edward Strickford	23	Canada	Hillsborough	Stealing	April 14, 1893	4	....	....
Frank Worcester	37	New Hampshire.	Hillsborough	Stealing	April 14, 1893	4	....	....
David Bullard	35	Vermont	Cheshire	Breaking and entering	April 15, 1893	3	....	....
Walter H. Brown	19	New Hampshire.	Merrimack	Stealing	April 17, 1893	1	....	1
Ira S. Clark	21	New Hampshire.	Merrimack	Breaking and entering	April 17, 1893	1	....	1
Harry Wentworth	32	Maine	Rockingham.	Rape	April 22, 1893	15	....	....
Harry Lester	26	England	Rockingham.	Burglary	April 22, 1893	5	....	....
Osborn Eldridge	20	New Hampshire.	Carroll	Burglary	April 27, 1893	4	....	....
J. H. Bradley	32	Vermont	Hillsborough	Stealing	May 5, 1893	3	....	....
Zigman Belska	27	Poland	Hillsborough	Stealing	May 5, 1893	1	6	....
Henry E. Lear, alias Bernard Fowler	65	Vermont	Hillsborough	Stealing horse	Sept. 26, 1893	7	....	....

REGISTER OF CONVICTS IN PRISON DECEMBER 1, 1893.—*Continued.*

NAMES.	Ages.	Where born.	What county committed in.	Crime.	When committed.	Sentence. Years.	Months.	Days.
Charles Landes	65	New York	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	....
Michael Riley	21	Ireland	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	1
Adolph Dessau, alias Joseph Green	21	Prussia	Hillsborough	Stealing	Oct. 3, 1893	5	....	....
John Wilson	21	New York	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	1
William Dowd	21	Massachusetts	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	1
Moses Germain	21	Canada	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	1
George Bigner	21	New York	Hillsborough	Burglary	Oct. 3, 1893	2	....	....
Harvey Dexter, alias Dexter Harvey	31	New Hampshire.	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	1
John Mooney	28	Ireland	Hillsborough	Breaking and entering	Oct. 3, 1893	1	....	1
Winnie Wentworth	32	New Hampshire.	Merrimack	Burglary	Oct. 5, 1893	5	....	....
Joseph Hagar	30	New York	Merrimack	Breaking and entering	Oct. 5, 1893	3	....	....
James McAvoy	17	England	Merrimack	Breaking and entering	Oct. 5, 1893	1	....	1
William A. Levi	50	New York	Strafford	Manslaughter	Oct. 9, 1893	8	....	....
Herbert E. Knight	23	Maine	Hillsborough	Breaking and entering	Oct. 10, 1893	5	....	....
George Crane	21	New York	Belknap	Tramp	Oct. 13, 1893	1	....	1
Charles Coe, alias Charles Bradley	21	Maine	Coös	Stealing horse	Oct. 24, 1893	1	....	1
John Magee	38	Canada	Cheshire	Stealing	Oct. 26, 1893	2	....	....
George Howe	29	New Hampshire.	Cheshire	Burglary	Oct. 26, 1893	2	....	....
Frank Cobb	33	New Hampshire.	Cheshire	Burglary	Oct. 26, 1893	2	....	....
William P. Rugg	44	New Hampshire.	Cheshire	Breaking and entering	Oct. 26, 1893	3	....	....
Walter Cobb	23	New Hampshire.	Cheshire	Burglary	Oct. 26, 1893	2	....	....
Frank S. Blake	45	Massachusetts	Cheshire	Breaking and entering	Oct. 26, 1893	3	....	....
Marshall E. Hill	23	Massachusetts	Cheshire	Burglary	Oct. 26, 1893	2	....	....
Charles C., alias Carlos C. Tuttle	45	New Hampshire.	Hillsborough	Arson	Oct. 31, 1893	7	....	....

George Woodman	23	Massachusetts	Rockingham	Breaking and entering	Nov. 1, 1893	2	....	....
James Blake	18	Maine	Carroll	Horse stealing	Nov. 13, 1893	2	....	....
Charles H. Richardson	54	New Hampshire	Grafton	Adultery	Nov. 16, 1893	3	....	....
Dick Kennedy	18	Vermont	Grafton	Burglary	Nov. 16, 1893	2	....	....
Fred Murray, alias Bailey	26	Canada	Coös	Burglary, 2 indictments	Nov. 20, 1893	8	....	....
Albert Jameson	24	New Hampshire	Merrimack	Manslaughter	Nov. 21, 1893	3	....	....
Michael Croning	25	New Hampshire	Hillsborough	Stealing	Nov. 21, 1893	3	....	....

TABLE

Showing the number of convicts in the prison, committed, discharged, pardoned, deceased, and escaped in each year since the establishment of the institution, 1812.

Year.	In prison.	Committed.	Discharged.	Pardoned.	Removed to Asylum for Insane.	Died.	Escaped.
1812	1	1	.....	.....	.....	.....	.....
1813	12	11	.....	.....	.....	.....	.....
1814	22	14	4	.....	.....	.....	.....
1815	23	14	5	2	.....	.....	.....
1816	48	31	5	1	.....	.....	5
1817	59	29	13	3	.....	1	1
1818	69	26	16	.....	.....	.....	.....
1819	72	16	20	1	.....	1	2
1820	61	18	15	2	.....	2	.....
1821	65	23	15	2	.....	2	.....
1822	58	16	19	2	1	3	.....
1823	66	26	11	5	.....	1	.....
1824	62	19	17	5	.....	1	.....
1825	66	24	13	3	.....	1	2
1826	57	13	15	4	.....	1	.....
1827	48	12	14	7	.....	2	.....
1828	86	20	8	4	....	.....	.....
1829	50	11	9	7	.....	1	.....
1830	63	31	9	4	.....	.....	.....
1831	81	24	8	3	.. ..	.....	.....
1832	82	19	10	6	.....	1	.....
1833	81	16	8	9	.....	.....	1
1834	79	13	4	11	....	.....	.....
1835	78	23	6	16	.....	.....	.....
1836	86	21	8	4	.....	1	2
1837	72	12	15	10	.....	1	.....
1838	70	5	4	3	.....	.....	.....
1839	73	30	10	15	.....	2	.....
1840	78	24	4	14	.....	1	.....
1841	48	28	13	7	.....	2	.....
1842	92	20	9	3	.....	... .	.....
1843	99	28	17	4	.....	.....	.....
1844	88	25	19	15	.....	1	.....
1845	81	14	8	12	.....	2	.....
1846	74	30	12	22	.....	1	.....
1847	61	14	12	13	.....	1	.....
1848	77	42	11	14	.....	.....	1
1849	82	17	9	2	.....	1	.....
1850	91	36	10	14	1	2	.....
1851	92	26	7	11	.....	1	1
1852	111	44	11	11	.....	6	.....
1853	109	24	9	15	.....	2	.....
1854	105	28	13	13	.....	6	.....
1855	97	26	10	17	1	6	.....
1856	94	32	19	8	.....	3	.....
1857	86	23	27	9	.....	4	.....
1858	110	49	14	9	.....	.....	.....
1859	105	37	22	16	1	3	.....
1860	110	35	18	10	1	1	.....
1861	119	42	19	10	.....	4	.....
1862	112	31	20	12	1	5	.....
1863	101	22	13	14	.....	5	1
1864	92	22	14	17	.....	.....	.....
1865	70	9	17	8	1	5	.....
1866	111	60	7	15	.....	2	1
1867	118	45	17	16	.....	3	2
1868	135	46	13	13	.....	3	.....
1869	129	39	24	19	.....	2	.....
1870	118	32	20	18	1	3	1
1871	91	29	38	14	2	2	.....

TABLE.—*Continued.*

Year.	In prison.	Committed.	Discharged.	Pardoned.	Removed to Asylum for Insane.	Died.	Escaped.
1872	80	25	24	8	.....	4	.....
1873	88	33	19	4	.....	2	.....
1874	95	41	19	5	.....	10	.....
1875	127	56	15	5	.....	4	.....
1876	191	64	32	9	.....	3	.....
1877	212	65	25	15	1	11	.....
1878	236	76	21	9	.....	12	.....
1879	252	58	72	24	1	12	.....
1880	228	48	52	21	.....	4	.....
1881	202	51	39	14	2	7	.....
1882	180	39	32	9	.....	7	.....
1883	168	36	40	2	1	4	.....
1884	182	61	29	7	.....	6	.....
1885	175	35	36	7	.....	5	.....
1886	179	56	43	6	.....	2	.....
1887	182	50	55	5	.....	1	.....
1888	159	38	40	2	1	1	.....
1889	157	42	36	8	2	1	.....
1890	178	68	56	11	1	2	.....
1891	168	61	35	4	1	2	.....
1892	198	72	38	5	2	6	.....
1893	223	66	42	4	1	2	.....
		2,677	1,536	708	22	106	20

THIRTEENTH ANNUAL REPORT

RELATING TO THE

REGISTRATION AND RETURN

OF

BIRTHS, MARRIAGES, DIVORCES, AND DEATHS

IN NEW HAMPSHIRE

FOR THE YEAR 1892.

VOLUME X. . . NEW SERIES.

CONCORD:
EDWARD N. PEARSON, PUBLIC PRINTER.
1893.

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CONCORD, N. H.

THE STATE OF NEW HAMPSHIRE.

OFFICE OF THE REGISTRAR OF VITAL STATISTICS,

CONCORD, November 1, 1893.

To His Excellency the Governor and the Honorable Council:

I have the honor to submit herewith, in accordance with the laws of the State of New Hampshire, the thirteenth annual report relating to the registration of births, marriages, divorces, and deaths in this state for the year ending December 31, 1892.

The number of births reported in the state for the year 1892 was 7,746, or 236 more than was reported in 1891; the number of marriages was 4,074, or 170 more than was returned in 1891; the number of deaths was 7,988, or 678 more than in 1891.

The total population of the state, according to the census of 1890, is 376,530, and the proportion of births, marriages, and deaths to each one thousand of the population is as follows:

Birth-rate, 20.57; marriage-rate, 10.81 (couples); death-rate, 21.21.

The tables have been arranged substantially as in the last registration report.

Reference should be had to the index at the end of this volume for any subject included in this report.

Respectfully submitted,

Irving A. Watson

Registrar of Vital Statistics.

TABLE No. I.

Showing Births for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, *and* 1892.

Counties.	Population in 1880.	Population in 1890.	Births.												
			1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Rockingham	49,064	49,650	733	675	749	692	637	640	757	727	750	752	773	764	797
Strafford	35,558	38,442	322	423	625	698	640	621	662	701	725	705	784	814	808
Belknap.....	17,948	20,321	215	227	273	261	242	256	263	296	307	328	322	370	395
Carroll.....	18,224	18,124	153	198	274	286	275	245	264	249	236	260	261	279	309
Merrimack.....	46,300	49,435	628	750	809	723	739	734	818	773	852	921	938	1,032	988
Hillsborough.. .	75,634	93,247	840	879	1,617	1,675	1,843	1,952	2,148	2,313	1,798	1,923	1,963	2,144	2,286
Cheshire.....	28,734	29,579	255	348	445	496	554	511	514	525	553	546	543	602	611
Sullivan.....	18,161	17,304	245	236	265	269	268	267	230	269	276	287	306	309	339
Grafton.....	38,788	37,217	584	593	657	647	643	631	623	623	599	695	636	658	618
Coös	18,580	23,211	274	286	410	403	406	462	378	434	347	495	420	538	595
Total.....	346,991	376,530	4,249	4,615	6,124	6,150	6,247	6,319	6,657	6,910	6,443	6,912	6,946	7,510	7,746

TABLE No. I.—*Continued.*

Showing Marriages for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, *and* 1892.

Counties.	Population in 1880.	Population in 1890.	Marriages.												
			1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Rockingham	49,064	49,650	310	382	419	399	419	447	440	457	420	484	458	507	502
Strafford.....	35,558	38,442	255	332	428	425	415	388	418	420	416	377	457	466	466
Belknap.....	17,948	20,321	108	177	166	198	147	150	183	213	183	186	178	200	208
Carroll.....	18,224	18,124	136	149	159	175	171	182	177	149	163	176	155	200	190
Merrimack.....	46,300	49,435	330	353	364	432	344	361	345	421	405	423	473	430	463
Hillsborough....	75,634	93,247	752	674	1,025	949	886	815	876	915	879	1,013	939	1,043	1,252
Cheshire.....	28,734	29,579	195	206	232	262	238	233	240	255	221	250	237	289	269
Sullivan.....	18,161	17,304	134	151	149	167	138	109	140	123	146	154	172	175	152
Grafton.....	38,788	37,217	274	270	319	339	332	327	318	328	322	343	314	338	332
Coös	18,580	23,211	135	146	172	149	202	168	187	214	224	215	238	256	240
Total.....	346,991	376,530	2,629	2,830	3,433	3,495	3,292	3,180	3,324	3,495	3,379	3,621	3,621	3,904	4,074

TABLE No. I.—*Concluded.*

Showing Deaths for 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, *and* 1892.

Counties.	Population in 1880.	Population in 1890.	Deaths.												
			1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Rockingham	49,064	49,650	627	717	732	699	873	911	963	876	896	875	1,065	991	1,026
Strafford	35,558	38,442	184	329	372	494	627	619	609	673	688	691	801	809	864
Belknap.....	17,948	20,321	147	153	219	262	285	289	362	369	392	389	374	392	440
Carroll..... ..	18,224	18,124	107	189	219	253	333	269	303	294	328	298	303	341	342
Merrimack.....	46,300	49,435	595	695	726	762	736	796	833	835	920	891	983	951	1,064
Hillsborough....	75,634	93,247	1,203	1,396	1,390	1,551	1,655	1,701	1,681	1,697	1,846	1,740	1,973	1,957	2,092
Cheshire	28,734	29,579	240	271	405	418	497	494	475	482	488	525	557	482	608
Sullivan.....	18,161	17,304	190	261	261	254	273	284	328	283	327	214	332	280	382
Grafton	38,788	37,217	429	482	487	547	652	611	616	602	655	625	651	648	749
Coös	18,580	23,211	107	157	190	181	263	227	256	368	314	348	329	459	421
Total.....	346,991	376,530	3,829	4,650	5,001	5,421	6,194	6,201	6,426	6,479	6,854	6,696	7,368	7,310	7,988

TABLE No. II.

Population of 1890; Births, Marriages, and Deaths, with percentage of each to one thousand of the population, for the year ending December 31, 1892.

COUNTIES.	Population in 1890.	Births.	Rate per 1,000 of population.	Marriages.	Rate per 1,000 of population.	Deaths.	Rate per 1,000 of population.
Rockingham	49,650	797	16.05	502	10.08	1,026	20.66
Strafford	38,442	808	21.01	466	11.94	864	22.47
Belknap	20,321	395	19.43	208	10.00	440	21.65
Carroll	18,124	309	17.04	190	10.43	342	18.87
Merrimack	49,435	988	19.98	463	9.24	1,064	21.52
Hillsborough	93,247	2,286	24.51	1,252	12.93	2,092	22.43
Cheshire	29,579	611	20.65	269	9.04	608	20.55
Sullivan	17,304	339	19.59	152	8.44	382	21.49
Grafton	37,217	618	16.60	332	8.62	749	20.01
Coös	23,211	595	25.63	240	9.94	421	18.13
Total	376,530	7,746	20.57	4,074	10.81	7,988	21.21

TABLE

Births, Marriages, and Deaths for

ROCKINGHAM

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Atkinson	483	2	4	..	6	12.42	5	....	....	1	..
Auburn	631	3	1	1	5	7.92	4	1	....	....	..
Brentwood	967	4	4	..	8	8.27	6	1	....	....	1
Candia	1,108	2	3	..	5	4.51	4	....	....	1	..
Chester	958	7	5	..	12	12.52	10	1	....	1	..
Danville	666	4	4	..	8	12.01	4	2	1	1	..
Deerfield	1,220	15	6	..	21	17.21	19	....	....	....	2
Derry	2,604	28	26	1	55	21.12	46	....	3	6	..
East Kingston	461	1	1	..	2	4.33	1	1	....	....	..
Epping	1,721	23	35	..	58	33.70	26	25	6	1	..
Exeter	4,284	42	41	2	85	19.84	43	21	12	5	4
Fremont	726	8	8	1	17	23.41	10	6	....	1	..
Greenland	647	6	3	..	9	13.91	5	....	4	....	..
Hampstead	860	4	2	..	6	6.97	6	....	....	....	..
Hampton	1,330	8	5	..	13	9.77	12	....	1	....	..
Hampton Falls	622	1	2	..	3	4.82	3	....	...	....	..
Kensington	547	6	1	..	7	12.79	6	1	....	....	..
Kingston	1,120	8	6	..	14	12.49	12	1	....	1	..
Londonderry	1,220	2	12	..	14	11.47	11	....	3	....	..
Newcastle	488	2	3	..	5	10.24	4	....	....	1	..
Newington	401	3	2	..	5	12.46	5	....	....	....	..
Newmarket	2,742	35	31	..	66	24.07	13	41	3	6	3
Newton	1,064	9	8	..	17	15.97	10	4	....	2	1
North Hampton	804	6	7	..	13	16.16	12	....	...	....	1
Northwood	1,478	10	9	1	20	13.53	19	....	1	....	..
Nottingham	988	4	6	..	10	10.12	7	....	2	1	..
Plaistow	1,085	5	5	..	10	9.21	5	2	3	....	..
Portsmouth	9,827	91	68	2	161	16.38	105	29	10	16	1
Raymond	1,131	18	10	..	28	24.75	25	....	1	1	1
Rye	978	7	3	..	10	10.22	8	....	2	....	..
Salem	1,805	17	8	..	25	13.85	17	2	2	4	..
Sandown	475	3	2	..	5	10.52	4	1	....	....	..
Seabrook	1,672	18	20	1	39	23.32	34	....	1	1	3
South Hampton	370	2	4	..	6	16.21	4	....	1	1	..
S. Newmarket	855	4	6	..	10	11.69	9	....	....	1	..
Stratham	680	6	3	..	9	13.23	7	....	1	1	..
Windham	632	6	4	..	10	15.82	5	1	1	3	..
Total	49,650	420	368	9	797	16.05	526	140	58	56	17

No. III.

the year ending December 31, 1892.

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
2	....	....	....	....	2	12	10	....	22	19	3	....	45.54
2	....	....	....	....	2	5	5	....	10	10	....	....	16.14
6	....	....	....	....	6	16	14	....	30	7	....	23	31.02
13	....	1	....	....	14	13	18	....	31	29	2	....	27.97
5	....	....	....	2	7	8	9	....	17	15	1	1	17.74
5	....	....	....	....	5	6	4	....	10	8	....	2	15.01
6	....	1	....	....	7	19	14	....	33	28	....	5	27.04
19	....	1	2	1	23	29	17	1	47	40	....	7	18.04
4	....	....	....	....	4	6	9	....	15	13	1	1	32.53
6	....	....	....	1	7	24	24	....	48	44	2	2	27.89
27	11	4	2	7	51	43	37	....	80	66	9	5	18.67
4	....	....	1	....	5	10	9	....	19	17	2	....	26.17
2	....	1	....	....	3	4	5	....	9	9	....	....	13.91
7	....	....	....	....	7	5	7	....	12	9	....	3	13.96
10	1	1	....	....	12	5	6	....	11	9	....	2	8.27
10	...	....	....	....	10	6	5	...	11	10	....	1	17.68
5	....	....	....	....	5	5	5	....	10	8	....	2	18.28
2	....	1	....	....	3	6	4	....	10	8	1	1	8.92
8	....	....	....	....	8	19	13	....	32	25	4	3	26.22
....	....	1	....	....	1	4	6	....	10	8	1	1	20.49
4	....	....	....	....	4	4	3	....	7	7	....	....	17.45
9	7	3	....	....	19	32	39	....	71	56	15	....	25.90
10	....	2	1	....	13	13	12	....	25	21	2	2	23.49
2	....	....	....	....	2	3	6	....	9	9	....	....	11.19
16	....	....	....	....	16	12	12	....	24	19	1	4	16.24
6	....	....	....	....	6	10	13	....	23	18	2	3	23.27
7	1	....	....	....	8	7	4	....	11	6	3	2	10.13
113	21	17	16	25	192	106	104	....	210	152	40	18	21.36
16	....	....	....	1	17	11	10	....	21	20	....	1	18.56
6	....	....	1	....	7	4	10	....	14	13	....	1	14.31
6	....	....	....	....	6	30	12	....	42	34	3	5	23.26
1	....	....	....	....	1	3	4	....	7	7	....	....	14.56
12	....	2	1	....	15	23	18	1	42	38	3	1	25.11
3	....	1	....	....	4	4	5	....	9	8	....	1	24.32
3	1	....	....	....	4	8	10	....	18	18	....	....	21.05
3	....	...	....	....	3	7	10	....	17	15	....	2	25.00
....	1	2	....	....	3	2	7	....	9	9	....	....	14.24
360	43	38	24	37	502	524	500	2	1,026	832	95	99	20.66

TABLE No. III.

STRAFFORD

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Barrington	1,408	8	8	..	16	11.36	12	3	....	1	..
Dover	12,790	147	149	..	296	23.14	123	112	26	31	4
Durham	871	6	5	..	11	11.62	6	....	....	1	4
Farmington	3,064	17	23	..	40	13.05	37	1	1	1	..
Lee	606	4	....	..	4	6.60	1	1	....	2	..
Madbury	367	2	2	..	4	10.89	4	....	....	....	..
Middleton	207	....	3	..	3	14.49	2	...	....	1	..
Milton	1,640	13	11	..	24	14.63	23	....	....	1	..
New Durham	579	9	6	..	15	25.90	7	6	1	1	..
Rochester	7,396	65	69	3	137	18.52	64	57	4	8	4
Rollinsford	2,003	23	25	1	49	24.46	12	31	4	1	1
Somersworth	6,207	105	90	1	196	31.57	38	132	11	12	3
Strafford	1,304	7	6	..	13	9.96	11	1	1	....	..
Total	38,442	406	397	5	808	21.01	340	344	48	60	16

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
12	....	....	2	....	14	16	21	....	37	35	1	1	26.27
105	24	11	14	3	157	161	170	....	331	243	64	24	25.87
7	....	....	....	1	8	14	13	....	27	25	1	1	30.99
31	....	1	....	....	32	24	39	....	63	57	4	2	20.56
4	....	....	1	....	5	7	5	....	12	11	....	1	19.80
2	....	....	....	....	2	4	5	....	9	9	....	....	24.52
3	....	....	....	....	3	3	2	....	5	5	....	....	24.15
9	...	1	1	....	11	12	10	....	22	20	....	2	13.29
1	2	....	....	....	3	6	8	....	14	11	1	2	24.17
78	20	9	8	5	120	62	72	....	134	116	12	6	18.11
13	9	2	1	....	25	23	24	....	47	31	12	4	23.42
31	41	3	2	3	80	61	76	....	137	94	31	12	22.07
5	....	....	....	1	6	16	10	....	26	24	....	2	19.93
301	96	27	29	13	466	409	455	....	864	681	126	57	22.47

TABLE No. III.

BELKNAP

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Alton	1,372	12	13	..	25	18.22	19	2	1	3	..
Barnstead	1,264	10	7	1	18	14.24	13	1	....	1	3
Belmont	1,142	13	14	..	27	23.64	16	7	....	3	1
Centre Harbor	479	2	6	..	8	16.70	5	3	....	....	..
Gilford	3,585	29	36	2	67	18.68	35	17	6	4	5
Gilmanton	1,211	6	10	..	16	13.21	13	....	....	2	1
Laconia	6,143	91	79	2	172	27.99	51	85	25	8	3
Meredith	1,642	12	9	..	21	12.78	17	....	1	2	1
New Hampton	935	2	3	..	5	5.34	5	....	....	....	..
Sanbornton	1,027	5	4	..	9	8.76	7	....	1	1	..
Tilton	1,521	17	10	..	27	17.75	16	5	2	3	1
Total	20,321	199	191	5	395	19.43	197	120	36	27	15

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
15	....	2	....	....	17	20	13	....	33	31	2	....	24.05
10	....	....	....	1	11	4	22	....	26	22	1	3	20.56
9	....	....	....	1	10	18	16	....	34	28	2	4	29.77
3	....	....	....	....	3	....	8	....	8	8	....	....	16.70
21	5	2	2	3	33	33	35	....	68	50	3	15	18.96
8	....	....	....	1	9	16	18	....	34	20	....	14	28.07
35	28	13	7	6	89	65	64	....	129*	86	16	27	20.99
10	....	1	....	....	11	17	15	....	32	21	1	10	19.48
6	....	....	1	....	7	16	9	....	25	21	....	4	26.73
5	....	1	....	....	6	8	15	....	23	22	1	....	22.39
6	2	2	....	2	12	14	14	....	28	20	1	7	18.40
128	35	21	10	14	208	211	229	....	440	329	27	84	21.65

* Died at county farm, 5.

TABLE No. III.

CARROLL

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Albany	377	5	3	..	8	21.22	4	2	1	....	1
Bartlett	1,247	17	24	..	41	32.87	14	15	5	2	5
Brookfield	349	5	1	..	6	17.19	5	1	....	....	..
Chatham	329	1	2	..	3	9.11	2	....	....	....	1
Conway	2,331	26	39	2	67	28.74	49	8	1	5	4
Eaton	514	2	6	..	8	15.56	8	....	....	....	..
Effingham	720	3	6	..	9	12.50	8	....	....	....	1
Freedom	630	....	....	..	.....	.....	....	....	....	....	..
Hart's Location	187	4	1	..	5	26.73	2	3	....	....	..
Jackson	579	6	8	..	14	24.17	12	....	....	2	..
Madison	554	3	2	..	5	9.02	4	....	....	1	..
Moultonboro'	1,034	11	7	..	18	17.40	14	....	....	2	2
Ossipee	1,630	3	11	2	16	9.80	10	....	1	1	4
Sandwich	1,303	8	11	..	19	14.58	15	2	....	1	1
Tamworth	1,025	6	6	..	12	11.70	12	....	....	....	..
Tuftonborough	767	5	2	..	7	9.12	6	....	....	1	..
Wakefield	1,528	18	20	1	39	25.52	25	6	5	2	1
Wolfeborough	3,020	18	13	1	32	10.59	22	3	....	3	4
Total	18,124	141	162	6	309	17.04	212	40	13	20	24

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
2	....	....	....	....	2	1	2	....	3	3	....	.. .	7.95
8	....	....	1	....	9	15	7	....	22	6	2	14	17.64
2	....	....	....	....	2	3	1	....	4	4	....	....	11.46
7	....	....	....	....	7	2	2	....	4	4	....	....	12.15
35	....	....	5	3	43	22	27	....	49	41	4	4	21.02
6	....	....	....	1	7	3	1	....	4	4	....	....	7.78
...	3	...	1	....	4	7	9	....	16	14	1	1	22.22
7	....	....	....	....	7	7	5	....	12	1	....	11	19.04
....	....	....	....	....	....	3	....	....	3	3	....	....	16.04
5	....	....	....	....	5	4	4	....	8	7	1	....	13.81
3	....	....	....	....	3	3	3	....	6	5	....	1	10.83
7	....	1	1	....	9	6	13	....	19	15	1	3	18.37
18	....	....	1	....	19	21	15	....	36	24	....	12	22.08
9	....	1	....	1	11	14	15	....	29	27	1	1	22.25
12	....	....	1	1	14	6	12	....	18	16	....	2	17.56
6	....	....	....	....	6	14	12	....	26	23	2	1	33.88
13	2	....	2	....	17	25	9	....	34	30	....	4	22.25
22	1	2	....	....	25	27	22	....	49	42	1	6	16.22
162	6	4	12	6	190	183	159	....	342	269	13	60	18.87

TABLE No. III.

MERRIMACK

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Allenstown	1,475	29	35	..	64	43.38	1	53	2	7	1
Andover	1,090	10	12	..	22	20.18	17	1	....	3	1
Boscawen	1,487	17	13	1	31	20.84	15	5	3	4	4
Bow	725	8	3	..	11	15.17	6	....	3	1	1
Bradford	810	3	5	..	8	9.87	6	1	....	....	1
Canterbury	964	3	4	..	7	7.26	6	....	....	....	1
Chichester	661	2	5	..	7	10.58	6	....	1	....	..
Concord	17,004	223	192	1	416	24.46	199	143	39	29	6
Danbury	683	10	3	..	13	19.03	12	....	1	....	..
Dunbarton	524	1	4	..	5	9.54	4	....	1	....	..
Epsom	815	5	2	..	7	8.58	6	1	....	....	..
Franklin	4,085	47	43	..	90	22.03	50	21	8	9	2
Henniker	1,385	6	11	..	17	12.27	16	....	1	....	..
Hill	548	3	4	..	7	12.77	3	....	....	2	2
Hooksett	1,893	12	22	..	34	17.96	5	22	2	3	2
Hopkinton	1,817	14	12	..	26	14.30	24	...	1	....	1
Loudon	1,000	4	4	..	8	8.00	5	1	....	1	1
Newbury	487	5	4	..	9	18.48	9	....	....	....	..
New London	799	4	2	..	6	7.51	5	....	....	1	..
Northfield	1,115	4	10	..	14	12.55	10	1	2	1	..
Pembroke	3,172	58	42	3	103	32.47	16	74	4	6	3
Pittsfield	2,605	18	13	..	31	11.90	14	13	3	1	..
Salisbury	655	....	8	..	8	12.21	8	....	....	....	..
Sutton	849	5	2	..	7	8.24	6	....	....	1	..
Warner	1,383	12	7	..	19	13.73	13	3	1	1	1
Webster	564	4	4	..	8	14.18	6	1	....	....	1
Wilmot	840	3	6	1	10	11.90	8	1	....	1	..
Total	49,435	510	472	6	988	19.98	476	341	72	71	28

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
....	8	....	....	....	8	11	16	....	27	18	6	3	18.30
7	1	....	1	....	9	9	12	....	21	19	1	1	19.26
6	2	....	....	....	8	22	17	....	39	34	....	5	26.22
3	....	....	....	....	3	8	11	....	19	17	....	2	26.20
7	....	....	....	1	8	5	11	....	16	15	....	1	19 75
5	....	....	....	1	6	11	14	....	25	22	....	3	25.93
2	....	....	....	....	2	5	5	....	10	8	....	2	15.12
107	28	15	8	18	176	227	188	....	415	345	54	16	24.40
5	....	....	1	....	6	7	6	....	13	11	....	2	19.03
5	....	1	....	1	7	7	6	....	13	13	....	....	24.80
1	....	....	....	....	1	7	8	....	15	15	....	....	18.40
35	7	3	8	....	53	34	43	....	77	67	6	4	18.84
14	....	1	2	....	17	15	12	....	27	26	....	1	19.49
3	....	....	1	1	5	9	5	....	14	12	....	2	25.54
6	3	2	1	....	12	14	20	....	34	24	7	3	17.96
11	....	1	1	1	14	25	25	....	50	45	2	3	27.51
13	....	....	....	....	13	4	6	....	10	6	1	3	10.00
2	....	....	1	....	3	4	6	....	10	10	....	....	20.53
6	....	1	....	....	7	1	3	....	4	4	....	....	5.00
5	....	....	1	....	6	12	11	....	23	17	1	5	20.62
12	17	3	2	1	35	31	35	1	67	41	11	15	21.12
17	3	4	2	2	28	17	30	2	49	39	4	6	18.80
4	....	....	....	....	4	7	6	....	13	12	....	1	19.84
6	....	....	....	....	6	7	10	....	17	13	1	3	20.02
13	....	2	1	2	18	12	17	....	29	28	....	1	20.96
3	....	....	....	....	3	5	7	....	12	11	....	1	21.27
4	....	....	1	....	5	8	7	....	15	11	1	3	17.85
302	69	33	31	28	463	524	537	3	1,064	883	95	86	21.52

TABLE No. III.

HILLSBOROUGH

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Amherst	1,053	10	8	..	18	17.09	14	1	2	....	1
Antrim	1,248	14	14	..	28	22.43	19	5	3	....	1
Bedford	1,102	7	11	..	18	16.33	12	2	3	1	..
Bennington	542	7	8	..	15	27.67	8	4	1	....	2
Brookline	548	7	4	..	11	20.07	5	5	1	....	..
Deering	531	3	1	..	4	7.53	3	1	....	....	..
Francestown	837	8	7	..	15	17.92	9	5	1	....	..
Goffstown	1,981	20	13	1	34	17.16	29	2	....	3	..
Greenfield	607	5	9	..	14	23.06	7	4	....	3	..
Greenville	1,255	26	29	1	56	44.62	8	32	4	4	8
Hancock	637	5	5	..	10	15.69	7	.....	1	....	2
Hillsborough	2,120	25	22	..	47	22.16	39	4	2	2	..
Hollis	1,000	3	2	..	5	5.00	3	.....	1	1	..
Hudson	1,092	8	9	..	17	15.56	15	1	1	....	..
Litchfield	252	.....	2	..	2	7.93	2	.....	....	....	..
Lyndeboro'	657	5	4	..	9	13.69	7	.....	1	1	..
Manchester	44,126	481	503	45	1,029	23.31	191	668	53	65	52
Mason	629	3	6	..	9	14.30	7	2	....	....	..
Merrimack	951	6	2	..	8	8.41	2	5	1	....	..
Milford	3,014	30	27	..	57	18.91	31	14	8	4	..
Mont Vernon	179	3	1	..	4	8.35	3	.....	....	....	1
Nashua	19,311	354	336	8	698	36.14	191	394	43	61	9
New Boston	1,067	11	8	..	19	17.80	15	1	3	....	..
New Ipswich	969	11	16	..	27	27.86	20	6	....	1	..
Pelham	791	5	5	..	10	12.64	4	1	3	....	2
Peterboro'	2,507	30	18	..	48	19.14	33	10	2	3	..
Sharon	137	3	1	..	4	29.19	2	.....	....	1	1
Temple	342	.....	3	..	3	8.77	3	.....	....	....	..
Weare	1,550	14	8	1	23	14.83	19	1	....	1	2
Wilton	1,850	18	25	..	43	23.24	17	10	8	3	5
Windsor	62	.....	1	..	1	16.12	1	.....	2	2	1
Total	93,247	1,122	1,108	56	2,286	24.51	726	1,178	142	154	86

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
4	....	....	....	..	4	15	4	..	19	18	....	1	18.04
14	1	3	2	1	21	15	14	..	29	20	3	6	23.23
5	....	....	....	..	5	17	8	..	25	15	2	8	22.68
2	1	....	....	..	3	3	9	..	12	11	....	1	22.14
....	....	....	1	2	3	5	5	..	10	7	1	2	18.24
1	....	....	....	..	1	9	4	..	13	11	....	2	24.48
7	....	....	....	..	7	7	6	..	13	13	....	....	15.54
17	....	1	....	1	19	22	13	..	35	25	3	7	17.66
7	....	....	1	1	9	3	6	..	9	8	1	....	14.82
3	12	3	3	1	22	18	22	..	40	28	11	1	31.87
5	....	1	....	..	6	6	4	..	10	10	....	....	15.69
23	1	....	1	5	30	23	22	..	45	40	4	1	21.22
4	....	....	..	..	4	12	8	..	20	20	....	....	20.00
4	....	1	1	..	6	12	11	..	23	21	1	1	21.06
1	....	....	....	..	1	1	3	..	4	4	....	....	15.87
7	....	1	....	..	8	8	9	..	17	16	....	1	25.87
208	379	78	58	16	739	501	525	12	1,038	682	268	88	23.52
11	....	....	....	..	11	6	5	..	11	11	....	....	17.48
3	....	....	..	..	3	10	12	..	22	20	2	....	23.13
15	3	1	2	..	21	27	33	..	60	50	7	3	19.90
1	1	1	....	1	4	1	3	..	4	3	....	1	8.35
126	81	32	21	6	266	199	203	..	402	280	71	51	20.81
5	....	....	....	1	6	13	11	..	24	20	1	3	22.49
8	1	....	....	..	9	7	17	..	24	19	4	1	24.76
2	2	1	....	..	5	8	16	..	24	20	3	1	30.34
15	1	2	....	..	18	29	17	..	46	41	2	3	18.34
....	....	....	....	..	.....	.....	1	..	1	.....	....	1	7.29
....	....	....	....	..	.....	4	2	..	6	4	1	1	17.54
7	....	....	....	..	7	13	17	..	30	22	1	7	19.35
12	....	....	1	..	13	40	34	..	*74	27	6	41	40.00
1	....	....	....	..	1	2	.....	..	2	2	....	....	32.25
518	483	125	91	35	1,252	1,036	1,044	12	2,092	1,468	392	232	22.43

* Died at county farm, 36.

TABLE No. III.

CHESHIRE

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Alstead	870	4	4	..	8	9.19	4	....	1	1	2
Chesterfield	1,046	4	9	..	13	12.42	9	1	2	1	..
Dublin	582	3	2	..	5	8.59	3	1	1	....	..
Fitzwilliam	1,122	8	8	..	16	14.26	8	5	2	1	..
Gilsum	643	6	8	..	14	21.77	12	1	1	....	..
Harrisville	748	8	9	1	18	24.06	7	8	....	3	..
Hinsdale	2,258	23	26	..	49	21.70	20	14	7	5	3
Jaffrey	1,469	14	18	..	32	21.78	17	12	3	....	..
Keene	7,446	78	72	..	150	20.14	96	37	5	10	2
Marlborough	1,695	27	27	..	54	31.85	15	30	7	....	2
Marlow	584	5	4	..	9	15.41	7	1	....	....	1
Nelson	332	1	3	..	4	12.04	3	....	....	1	..
Richmond	476	8	3	..	11	23.10	9	....	1	1	..
Rindge	996	4	14	..	18	18.07	10	6	1	1	..
Roxbury	129	....	1	..	1	7.75	....	....	....	....	1
Stoddard	400	2	1	..	3	7.50	3	....	....	....	..
Sullivan	337	....	1	..	1	2.96	1	....	....	....	..
Surry	270	1	5	..	6	22.22	5	....	1	....	..
Swanzey	1,600	16	15	..	31	19.37	28	....	1	1	1
Troy	999	18	21	..	39	39.03	12	19	3	3	2
Walpole	2,163	31	43	1	75	34.67	32	29	7	6	1
Westmoreland	830	2	5	..	7	8.43	3	....	....	....	4
Winchester	2,584	24	22	1	47	18.18	25	10	2	....	10
Total	29,579	287	321	3	611	20.65	329	174	45	34	29

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
6	....	1	1	1	9	11	7	....	18	16	....	2	20.68
6	1	....	....	....	7	7	7	....	14	12	....	2	13.38
1	....	....	....	....	1	7	3	....	10	8	1	1	17.18
5	....	....	....	1	6	10	16	....	26	22	1	3	23.17
5	....	....	....	1	6	5	3	....	8	8	....	....	12.44
3	1	....	....	....	4	2	8	....	10	5	3	2	13.38
11	5	4	2	2	24	17	22	....	39	33	5	1	17.27
7	3	1	2	....	13	9	17	....	26	20	5	1	17.69
62	6	7	7	....	82	80	58	....	138	123	12	3	18.53
3	2	2	....	1	8	17	16	....	33	29	4	....	19.46
7	....	....	....	....	7	9	8	....	17	16	....	1	29.10
3	....	...	....	....	3	1	1	....	2	2	....	....	6.02
1	....	....	....	....	1	9	5	....	14	12	1	1	29.41
8	....	1	3	....	12	13	7	....	20	19	1	....	20.08
....	....	....	....	....	.....	3	3	....	6	1	....	5	46.51
3	....	1	....	....	4	6	5	....	11	10	....	1	27.50
2	....	....	....	....	2	1	3	....	4	4	....	....	11.86
....	....	....	....	....	.....	3	3	....	6	5	....	1	22.22
13	1	....	....	1	15	19	20	....	39	37	2	....	24.37
15	1	2	....	2	20	14	17	....	31	23	5	3	31.03
10	2	2	2	1	17	38	26	....	64	52	9	3	29.58
7	1	....	....	....	8	11	19	....	*30	13	1	16	36.14
14	4	....	1	1	20	21	21	....	42	27	3	12	16.21
192	27	21	18	11	269	313	295	....	608	497	53	58	20.55

* Died at county farm, 12.

TABLE No. III.

SULLIVAN

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Acworth	717	9	2	..	11	15.34	9	1	....	1	..
Charlestown	1,466	7	11	..	18	12.27	15	1	1	1	..
Claremont	5,565	75	56	..	131	23.53	57	42	14	17	1
Cornish	954	8	6	..	14	14.67	12	....	....	2	..
Croydon	512	7	8	..	15	29.29	13	....	1	....	1
Goshen	384	5	....	..	5	13.02	3	....	2	....	..
Grantham	424	7	3	..	10	23.58	9	....	....	1	..
Langdon	305	1	10	..	11	36.06	8	....	2	1	..
Lempster	519	8	1	..	9	17.34	7	....	....	1	1
Newport	2,623	36	28	1	65	24.78	41	8	6	7	3
Plainfield	1,173	5	6	..	11	9.37	10	....	1	....	..
Springfield	540	2	2	..	4	7.40	4	....	....	....	..
Sunapee	900	9	10	..	19	21.11	12	3	3	1	..
Unity	653	7	6	..	13	19.90	9	....	2	1	1
Washington	569	1	2	..	3	5.27	3	....	....	....	..
Total	17,304	187	151	1	339	19.59	212	55	32	33	7

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
4	....	1	....	....	5	9	6	....	15	13	1	1	20.92
15	....	....	....	....	15	16	18	....	34	25	6	3	23.19
30	12	6	1	8	57	56	47	....	103	84	15	4	18.50
8	....	....	....	....	8	10	12	....	22	19	2	1	23.06
3	....	....	....	....	3	5	6	....	11	9	....	2	21.48
....	....	1	....	....	1	3	5	....	8	8	....	....	20.83
3	....	1	....	....	4	10	6	....	16	14	....	2	37.73
1	....	....	....	....	1	3	3	....	6	6	....	....	19.67
3	...	....	....	....	3	6	3	....	9	5	3	1	17.34
23	2	....	2	3	30	35	45	....	80	66	8	6	30.49
8	....	....	....	....	8	7	7	....	14	14	....	....	11.93
4	....	....	....	....	4	10	7	....	17	16	....	1	31.48
3	....	....	1	....	4	8	7	....	15	14	....	1	16.66
4	....	....	1	....	5	9	10	....	19	16	1	2	29.09
4	....	....	....	....	4	7	6	....	13	13	....	....	22.84
113	14	9	5	11	152	194	188	....	382	322	36	24	21.49

TABLE No. III.

GRAFTON

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Alexandria	679	5	8	..	13	19.14	10	....	....	1	2
Ashland	1,193	5	10	..	15	12.57	9	4	1	....	1
Bath	935	9	8	..	17	18.18	13	2	2	....	..
Benton	244	3	....	1	4	16.39	2	2	....	....	..
Bethlehem	1,267	14	11	..	25	19.73	18	2	3	2	..
Bridgewater	332	4	8	..	12	36.14	9	....	...	1	2
Bristol	1,524	17	12	..	29	19.02	19	2	....	3	5
Campton	982	3	9	..	12	12.21	7	3	....	1	1
Canaan	1,417	14	8	1	23	16.23	12	5	5	1	..
Dorchester	379	....	....	..	.....	.....	....	....	....	....	..
Easton	248	5	...	..	5	20.16	3	....	1	1	..
Ellsworth	150	1	2	..	3	20.00	2	....	....	1	..
Enfield	1,439	8	7	..	15	10.42	14	1	....	....	..
Franconia	594	4	3	..	7	11.78	6	....	1	....	..
Grafton	787	14	6	..	20	25.41	17	1	1	1	..
Groton	464	5	6	..	11	23.70	10	....	....	....	1
Hanover	1,817	7	8	..	15	8.25	14	....	....	1	..
Haverhill	2,545	7	23	1	31	12.18	22	4	4	....	1
Hebron	245	2	2	..	4	16.32	4	....	....	....	..
Holderness	595	4	4	..	8	13.44	6	....	1	1	..
Landaff	499	3	5	..	8	16.03	7	....	....	1	..
Lebanon	3,763	40	33	..	73	19.39	47	15	8	1	2
Lincoln	110	1	5	..	6	54.54	3	1	....	2	..
Lisbon	2,060	16	19	..	35	16.99	24	3	2	6	..
Littleton	3,365	38	29	2	69	20.50	29	26	7	7	..
Livermore	155	2	....	..	2	12.90	....	2	....	....	..
Lyman	543	2	7	..	9	16.57	5	....	2	2	..
Lyme	1,154	13	12	..	25	21.66	20	....	2	2	1
Monroe	478	3	2	..	5	10.46	5	....	....	....	..
Orange	245	3	3	..	6	24.48	6	....	....	....	..
Orford	916	16	11	..	27	29.47	24	....	2	1	..
Piermont	709	3	5	1	9	12.69	9	....	....	....	..
Plymouth	1,852	13	16	..	29	15.65	23	2	1	1	2
Rumney	947	4	7	..	11	11.61	8	1	1	1	..
Thornton	632	2	5	..	7	11.07	4	....	....	1	2
Warren	875	3	10	..	13	14.85	6	2	....	1	4
Waterville	39	....	....	..	.....	.....	....	....	....	....	..
Wentworth	698	5	4	..	9	12.89	8	....	....	....	1
Woodstock	341	4	2	..	6	17.59	5	....	....	....	1
Total	37,217	302	310	6	618	16.60	430	78	44	40	26

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
2	....	....	....	....	2	7	14	....	21	4	....	17	30.92
7	1	....	....	1	9	14	13	....	27	21	2	4	22.63
7	....	....	....	....	7	3	5	....	8	6	....	2	8.55
1	1	1	....	....	3	3	4	....	7	4	2	1	28.68
7	....	2	1	....	10	7	6	....	13	12	....	1	10.26
2	....	....	....	....	2	9	3	....	12	12	....	....	36.14
11	....	....	....	....	11	18	10	....	28	20	....	8	18.37
9	....	....	1	1	11	9	9	....	18	17	....	1	18.32
7	....	....	1	1	9	18	18	....	36	35	....	1	25.40
....	....	....	....	....	....	....	....	....	....	....	....	....	....
2	....	....	....	....	2	1	2	....	3	3	....	....	12.09
2	....	....	....	....	2	2	2	....	4	3	....	1	26.66
14	....	....	....	....	14	16	23	....	39	32	4	3	27.10
....	1	....	2	....	3	2	4	....	6	5	....	1	10.10
5	....	....	....	....	5	13	15	....	28	26	....	2	35.57
3	....	....	1	....	4	9	12	....	21	20	....	1	45.25
14	1	2	1	1	19	15	12	....	27	25	2	....	14.85
25	2	....	6	2	35	31	26	....	*57	30	2	25	22.39
2	....	....	....	....	2	3	3	....	6	4	....	2	24.48
2	....	....	....	....	2	11	6	....	17	13	1	3	28.57
2	1	....	....	....	3	4	4	....	8	8	....	....	16.03
42	4	2	4	....	52	42	49	....	91	79	11	1	24.18
2	....	....	....	1	3	2	....	....	2	1	1	....	18.18
15	1	2	2	....	20	20	19	....	39	36	....	3	18.93
12	5	3	3	9	32	35	39	....	74	59	7	8	21.99
....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	....	....	....	....	4	6	1	....	7	6	1	....	12.89
4	....	....	....	....	4	12	11	....	23	17	....	6	19.93
4	....	....	....	....	4	6	4	....	10	9	....	1	20.92
2	....	....	....	....	2	3	1	....	4	3	....	1	16.31
7	....	....	1	....	8	8	13	....	21	18	1	2	22.92
4	....	....	....	....	4	3	6	....	9	9	....	....	12.69
3	....	1	....	2	6	16	16	....	32	24	2	6	17.27
12	3	....	....	....	15	12	8	....	20	19	1	....	21.11
4	....	1	....	....	5	3	5	....	8	6	....	2	12.65
9	....	....	....	1	10	4	5	....	9	9	....	....	10.28
....	....	....	....	....	....	....	....	....	....	....	....	....	....
4	....	....	....	....	4	4	3	....	7	5	1	1	10.02
2	....	1	....	1	4	4	3	....	7	7	....	....	20.52
254	20	15	23	20	332	375	374	....	749	607	38	104	20.01

*Died at county farm, 20.

TABLE No. III.

COÖS

TOWNS.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Berlin	3,729	117	89	..	206	55.24	13	162	17	12	2
Cambridge	.....	....	....	..	.....	.....	....	....	....	....	..
Carroll	813	3	5	..	8	9.84	....	5	1	2	..
Clarksville	325	3	....	..	3	9.23	3	....	....	....	..
Colebrook	1,736	11	11	..	22	12.67	11	1	6	4	..
Columbia	605	5	6	..	11	18.18	4	2	4	1	..
Dalton	596	1	3	..	4	6.71	4	....	....	....	..
Dummer	455	5	3	..	8	17.58	6	...	2	....	..
Errol	178	5	1	2	8	44.94	4	....	1	....	3
Gorham	1,710	34	19	..	53	30.99	30	9	8	5	1
Jefferson	1,062	14	12	..	26	24.48	19	5	1	....	1
Lancaster	3,373	40	31	1	72	21.34	34	20	10	5	3
Milan	1,029	6	13	..	19	18.46	8	5	1	2	3
Millsfield	62	2	2	..	4	64.51	....	1	1	1	1
Northumberla'd	1,356	16	17	..	33	24.33	11	9	7	4	2
Pittsburg	669	2	1	..	3	4.48	2	....	....	1	..
Randolph	137	2	....	1	3	2.18	1	....	....	....	2
Shelburne	336	5	3	..	8	23.80	3	4	1	....	..
Stark	703	9	5	..	14	19.91	7	3	3	1	..
Stewartstown	1,002	7	5	..	12	11.97	6	....	2	4	..
Stratford	1,128	21	12	..	33	29.25	14	12	3	2	2
Whitefield	2,041	23	22	..	45	22.04	18	19	6	2	..
Total	23,211	331	260	4	595	25.63	198	257	74	46	20

—*Continued.*

COUNTY.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
7	23	4	7	1	42	57	48	....	105	62	26	17	28.15
....	....	....	....	....	.....	....	1	....	1	1	....	....	.....
4	....	3	4	....	11	6	4	....	10	4	4	2	12.30
2	....	....	1	....	3	2	5	....	7	4	....	3	21.53
16	3	3	1	....	23	20	14	....	34	29	1	4	19.58
3	....	1	1	....	5	4	2	....	6	4	1	1	9.91
1	....	1	....	....	2	3	5	....	8	6	1	1	13.42
1	....	1	....	1	3	3	2	....	5	1	....	4	10.98
2	....	2	....	....	4	1	1	....	2	2	....	....	11.23
17	6	1	3	1	28	21	11	....	32	26	4	2	18.71
6	2	....	....	....	8	10	10	....	20	4	1	15	18.83
17	8	2	8	....	35	24	24	....	48	36	2	10	14.23
1	....	....	....	....	1	5	12	....	17	10	3	4	16.52
....	....	....	....	....	.....	....	....	....	.....	.....	....	....	.....
2	3	1	2	2	10	12	8	....	20	10	4	6	14.74
2	....	3	3	1	9	3	2	....	5	2	....	3	7.47
....	1	....	....	....	1	2	4	....	6	4	....	2	4.37
4	....	....	....	....	4	1	....	....	1	1	....	....	2.97
5	4	....	2	....	11	9	7	....	16	11	3	2	22.75
4	....	1	....	1	6	11	14	....	*25	18	1	6	24.95
6	4	1	1	....	12	4	11	....	15	12	1	2	13.29
7	9	1	2	3	22	14	24	....	38	20	7	11	18.61
107	63	25	35	10	240	212	209	....	421	267	59	95	18.13

*Died at county farm, 6.

TABLE No. III.

RECAPITULATION

COUNTIES.	Population in 1890.	Births.									
		Sex.					Parentage.				
		Male.	Female.	Not stated.	Total.	Rate per 1,000.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.
Rockingham.	49,650	420	368	9	797	16.05	526	140	58	56	17
Strafford.....	38,442	406	397	5	808	21.01	340	344	48	60	16
Belknap.....	20,321	199	191	5	395	19.43	197	120	36	27	15
Carroll.....	18,124	141	162	6	309	17.04	212	40	13	20	24
Merrimack...	49,435	510	472	6	988	19.98	476	341	72	71	28
Hillsborough.	93,247	1,122	1,108	56	2,286	24.51	726	1,178	142	154	86
Cheshire.....	29,579	287	321	3	611	20.65	329	174	45	34	29
Sullivan.....	17,304	187	151	1	339	19.59	212	55	32	33	7
Grafton.....	37,217	302	310	6	618	16.60	430	78	44	40	26
Coös.....	23,211	331	260	4	595	25.63	198	257	74	46	20
Total.....	376,530	3,905	3,740	101	7,746	20.57	3,646	2,727	564	541	268

—*Concluded.*

BY COUNTIES.

Marriages.						Deaths.							
						Sex.				Nativity.			
Both American.	Both foreign.	Husband American.	Wife American.	Not stated.	Total.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
360	43	38	24	37	502	524	500	2	1,026	832	95	99	20.66
301	96	27	29	13	466	409	455	..	864	681	126	57	22.47
128	35	21	10	14	208	211	229	..	440	329	27	84	21.65
162	6	4	12	6	190	183	159	..	342	269	13	60	18.87
302	69	33	31	28	463	524	537	3	1,064	883	95	86	21.52
518	483	125	91	35	1,252	1,036	1,044	12	2,092	1,468	392	232	22.43
192	27	21	18	11	269	313	295	..	608	497	53	58	20.55
113	14	9	5	11	152	194	188	..	382	322	36	24	21.49
254	20	15	23	20	332	375	374	..	749	607	38	104	20.01
107	63	25	35	10	240	212	209	..	421	267	59	95	18.13
2,437	856	318	278	185	4,074	3,981	3,990	17	7,988	6,155	934	899	21.21

TABLE

Births by Sex and

COUNTIES.		January.	February.	March.	April.	May.
Rockingham	Males	31	31	32	44	35
	Females	25	25	25	36	33
	Not stated	3	.....	.....	.....	1
Strafford	Males	33	36	20	40	37
	Females	22	26	48	30	31
	Not stated	.....	.....	.....	.....	.....
Belknap	Males	22	17	23	5	34
	Females	10	18	16	8	23
	Not stated	.....	.....	1	1	.....
Carroll	Males	13	18	13	16	13
	Females	11	11	12	16	19
	Not stated	.....	.....	.....	1	.....
Merrimack	Males	38	39	45	53	36
	Females	36	34	26	39	44
	Not stated	3	1	.....	.....	.....
Hillsborough	Males	108	74	97	92	105
	Females	94	84	88	84	113
	Not stated	3	.....	1	5	5
Cheshire	Males	21	31	28	23	23
	Females	31	28	22	31	28
	Not stated	1	.....	.....	.....	.....
Sullivan	Males	19	20	12	11	21
	Females	16	14	8	10	7
	Not stated	.....	.....	.....	.....	.....
Grafton	Males	20	26	30	26	41
	Females	33	31	38	30	30
	Not stated	.....	1	1	.....	.....
Coös	Males	20	27	41	30	27
	Females	16	26	21	28	16
	Not stated	.....	.....	.....	.....	.....
Total	Males	325	319	341	340	372
	Females	294	297	304	312	344
	Not stated	10	2	3	7	6

No. IV.

Month, by Counties, 1892.

June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
38	30	37	33	38	34	37	.....	420	
43	36	24	37	25	29	30	.....	368	
.....	1	.....	1	2	.....	.....	1	9	797
42	29	32	23	39	29	46	.....	406	
41	30	42	30	31	33	32	1	397	
.....	.....	1	1	.....	.....	3	.....	5	808
13	11	16	11	15	14	17	1	199	
15	19	17	18	15	15	16	1	191	
1	.....	.....	1	.....	.....	1	.....	5	395
11	11	8	4	13	10	10	1	141	
11	14	15	15	16	11	11	.....	162	
.....	.....	.....	.....	3	1	1	.....	6	309
39	44	48	42	36	43	47	.....	510	
46	41	43	32	46	44	41	.....	472	
.....	1	.....	.....	.....	.....	1	.....	6	988
70	116	89	99	90	96	82	4	1,122	
108	98	91	83	85	98	77	5	1,108	
5	4	9	4	9	8	3	.....	56	2,286
27	21	20	21	26	21	25	.....	287	
27	25	24	30	29	26	20	.....	321	
.....	1	.....	.....	.....	1	.....	.....	3	611
16	15	12	10	18	17	14	2	187	
8	15	11	14	13	20	15	.....	151	
.....	1	.....	.....	.....	.....	.....	.....	1	339
30	28	27	15	18	18	22	1	302	
19	27	14	22	23	20	22	1	310	
.....	1	2	.....	1	.....	.....	.....	6	618
20	31	28	35	23	24	24	1	331	
21	15	29	19	20	24	25	.....	260	
.....	1	.....	.....	1	.....	1	1	4	595
306	336	317	293	316	306	324	10	3,905	
339	320	310	300	303	320	289	8	3,740	
6	10	12	7	16	10	10	2	101	7,746

TABLE

Twin Births by Months, Counties,

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Rockingham	....	1	1	....	....	2	....	1	....	1	....	2
Strafford	1	....	1	....	....	1	....	1	....	....	1	4
Belknap	....	....	2	1	....	....	....	....	2	....	....	....
Carroll	....	2	....	....	....	1	....	....	....	....	....	1
Merrimack	....	....	1	1	1	1	2	2	....	1	2	....
Hillsborough	2	1	1	3	2	3	1	....	....	1	3	2
Cheshire	....	....	....	1	1	1	1	1	1	1	1	....
Sullivan	....	....	....	2	1	....	....	1	....	2	....	2
Grafton	1	1	2	1	1	2	1	1	....	....	1	1
Coös	....	....	....	1	....	1	1	....	....	....	....	....
TRIPLETS.												
Carroll	....	....	....	....	....	....	....	....	....	1	....	....

No. V.

Sex, and Nativity, 1892.

Not stated.	Total.	Living.	Still-born.	Not stated.	Sex.			Both American.	Both foreign.	American mother.	American father.	Not stated.
					Male.	Female.	Not stated.					
....	8	14	2	.....	8	8	....	5	3	....	....	....
....	9	16	2	.....	13	5	....	3	3	1	2	....
....	5	7	3	.....	6	3	1	3	1	1	....	....
....	4	7	1	.....	4	4	....	2	2	....	....	....
....	11	20	2	.....	16	6	....	6	4	1	....	....
....	19	34	.....	4	24	14	....	5	12	1	1	....
....	8	13	3	.....	6	10	....	3	4	....	1	....
....	8	16	.....	.....	7	9	....	5	1	2	....	....
1	13	21	5	.....	12	14	....	10	1	....	1	1
....	3	6	.....	.....	2	4	....	....	2	1	....	....
....	1	2	1	.....	2	1	....	....	....	....	1	....

TABLE

Births showing Age of Mother,

Number of Child.	Under 15.			15 to 20.			20 to 25.			25 to 30.			30 to 35.		
	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.
1st	*3	*1	...	303	134	8	551	334	3	457	161	5	102	42	..
2d	..	..	...	70	36	3	371	240	1	281	175	3	125	59	..
3d	..	..	...	14	6	1	142	121	2	184	162	1	141	79	..
4th	..	..	...	1	....	....	58	56	...	141	134	2	93	68	..
5th	..	..	...	....	....	....	12	31	...	60	82	1	83	80	..
6th	..	..	...	....	....	....	2	14	...	31	62	..	56	99	..
7th	..	..	...	....	....	....	3	13	...	11	17	1	42	66	..
8th	..	..	...	....	....	....	.....	....	...	1	7	..	13	42	..
9th	..	..	...	....	....	....	.....	....	...	3	1	..	10	19	1
10th	..	..	...	....	....	....	.....	....	...	1	1	..	2	16	..
11th	..	..	...	....	....	....	.....	....	...	.....	1	..	1	3	..
12th	..	..	...	....	....	....	.....	....	...	1	1	..	...	5	..
13th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	2	..
14th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	1	..
15th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	...	..
16th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	1	..
17th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	...	..
18th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	...	..
19th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	...	..
20th	..	..	...	....	....	....	.....	....	...	.....	....	..	...	...	..
Not stated	..	..	...	6	4	....	20	41	1	20	45	1	19	28	..
Total	3	1	...	394	180	12	1,159	850	7	1,191	849	14	687	610	1

* Fourteen years of age.

No. VI.

Number of Child, by Nativity.

35 to 40			40 to 45.			45 to 50.			Not stated.			Total.			Grand total.*
American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	American.	Foreign.	Not stated.	
39	15	..	13	6	....	1	....	..	46	17	25	1,515	710	41	2,266
53	22	..	18	4	1	....	5	..	38	4	14	956	545	22	1,523
72	22	1	20	6	....	....	....	1	22	4	9	595	400	15	1,010
50	29	..	14	1	....	1	....	..	27	10	6	385	298	8	691
51	30	1	11	8	....	2	4	..	12	4	5	231	239	7	477
49	41	..	12	10	....	....	1	1	14	5	2	164	232	3	399
33	23	..	17	7	1	1	1	..	8	6	2	115	133	4	252
36	50	..	11	12	....	2	2	..	4	4	1	67	117	1	185
9	26	..	6	20	....	....	....	..	6	4	1	34	70	2	106
10	31	..	2	15	....	....	1	..	2	1	1	17	65	1	83
6	25	..	4	11	1	1	1	..	4	2	..	16	43	1	60
1	17	.	3	15	....	....	2	..	1	....	..	6	40	....	46
2	9	..	1	17	....	....	2	..	....	....	..	3	30	....	33
...	6	..	3	9	....	....	1	..	1	....	..	4	17	....	21
...	2	.	....	3	....	....	1	..	....	....	..	.....	6	....	6
...	3	..	....	3	....	..	..	..	....	....	..	.....	7	....	7
...	1	.	....	1	....	....	1	.	....	....	..	.....	3	....	3
...	...	..	1	2	....	....	...	..	....	....	..	1	2	....	3
...	...	..	1	1	....	....	....	..	....	....	..	1	1	....	2
...	...	..	....	....	....	....	....	..	....	..	1	.....	.....	1	1
9	14	..	4	9	....	....	2	..	40	23	19	118	166	31	315
420	366	2	141	160	3	8	24	2	225	84	86	4,228	3,124	137	7,489

* Not including still-births.

TABLE No. VII.

Still-births, showing number of Child and Age of Mother.

Number of Child.	Age of Mother.										
	Under 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	Over 50.	Not stated.	Total.
1st	....	30	41	44	12	6	4	1	....	9	147
2d	....	4	11	18	8	3	2	1	....	6	53
3d	....	1	4	14	9	6	1	....	....	2	37
4th	....	....	7	13	7	6	2	....	....	5	40
5th	....	....	1	9	13	....	4	....	....	2	29
6th	....	....	....	4	10	3	3	....	....	3	23
7th	....	....	....	1	2	2	1	....	....	....	6
8th	....	....	....	.....	1	4	....	....	....	....	5
9th	....	....	....	.....	2	4	1	....	....	....	7
10th	....	....	....	.....	1	1	2	1	....	....	5
11th	....	....	....	.....	....	2	....	3	....	....	5
12th	....	....	....	.....	3	2	....	....	....	....	5
13th	....	....	....	.....	1	....	4	....	....	....	5
14th	....	....	....	.....	1	....	1	1	....	....	3
15th	....	....	....	.....	....	1	2	....	....	....	3
16th	....	....	....	.....	....	....	1	....	....	....	1
Not stated	....	2	3	13	6	6	3	....	....	12	45
Total	....	37	67	116	76	46	31	7	....	39	419

TABLE VIII.

Still-births, by Sex, Parentage, and Months, by Counties.

COUNTIES.	Sex.			Parentage.						January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
	Males.	Females.	Not stated.	Both American.	Both foreign.	American mother and foreign father.	American father and foreign mother.	Not stated.	Total.													
Rockingham	23	20	3	32	8	1	3	2	46	4	2	3	6	3	2	2	2	2	8	7	4	1
Strafford	16	18	....	9	15	4	5	1	34	7	2	2	3	....	3	1	1	....	8	3	4	..
Belknap	11	7	1	8	2	5	3	1	19	1	1	1	4	1	3	2	1	3	1	1	....	..
Carroll	10	3	....	9	....	2	2	....	13	3	2	....	....	1	2	1	....	....	3	1	....	..
Merrimack	35	14	3	25	16	4	3	4	52	9	1	5	3	3	3	4	7	4	4	2	7	..
Hillsborough	63	51	28	39	86	5	9	3	142	7	6	6	16	13	7	21	16	8	17	19	6	..
Cheshire	13	12	1	10	11	....	3	2	26	2	3	1	3	4	4	4	1	....	....	2	2	..
Sullivan	12	6	....	15	....	....	....	3	18	2	2	2	1	....	....	....	3	1	3	4	....	..
Grafton	20	15	2	22	6	1	3	5	37	2	6	1	3	5	4	3	6	....	2	3	2	..
Coös	14	18	....	6	16	6	3	1	32	1	2	5	4	3	3	2	2	3	3	....	4	..
Total	217	164	38	175	160	28	34	22	419	38	27	26	43	33	31	40	39	21	49	42	29	1

MARRIAGES.

TABLE No. IX.

Marriages by Counties and Nativity, 1892.

COUNTIES.	Both American.	Both foreign.	Groom American.	Bride American.	Not stated.	Total.
Rockingham	360	43	38	24	37	502
Strafford	301	96	27	29	13	466
Belknap	128	35	21	10	14	208
Carroll	162	6	4	12	6	190
Merrimack	302	69	33	31	28	463
Hillsborough	518	483	125	91	35	1,252
Cheshire	192	27	21	18	11	269
Sullivan	113	14	9	5	11	152
Grafton	254	20	15	23	20	332
Coös	107	63	25	35	10	240
Total	2,437	856	318	278	185	4,074

TABLE No. X.

Marriages by Month, and Counties.

COUNTIES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.
Rockingham.	35	33	35	36	24	57	39	32	55	53	55	42	6	502
Strafford.....	32	34	27	35	34	38	33	37	49	63	40	40	4	466
Belknap.....	23	19	17	14	19	13	20	7	17	21	19	19	..	208
Carroll.....	12	12	11	22	13	15	11	7	17	21	26	23	..	190
Merrimack..	31	33	26	33	35	56	26	29	36	38	67	52	1	463
Hillsborough	80	111	63	94	95	126	77	106	119	136	136	101	8	1,252
Cheshire....	23	14	21	24	26	36	14	13	26	27	22	20	3	269
Sullivan.....	11	12	8	7	11	12	6	14	15	20	18	16	2	152
Grafton.....	23	24	20	31	21	29	13	22	40	33	36	29	11	332
Coös	15	11	9	17	22	27	29	11	22	29	26	18	4	240
Total....	285	303	237	313	300	409	268	278	396	441	445	360	39	4,074

TABLE No. XI.

Ages of Grooms.	Ages of Brides.														
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	Over 80.	Not stated.	No. of grooms.
Under 20.....	130	47	6	1	....	..	..	..	..	..	..	..	..	..	..	184
20 to 25.....	647	787	148	15	3	1	..	..	..	..	..	..	..	..	4	1,605
25 to 30.....	250	462	265	55	9	3	..	..	1	..	..	..	..	..	2	1,047
30 to 35.....	53	167	142	85	27	7	1	..	..	..	..	..	..	..	..	482
35 to 40.....	17	71	66	58	36	9	3	1	..	..	..	..	..	..	..	261
40 to 45.....	7	20	19	36	33	21	8	2	..	..	1	..	..	..	1	148
45 to 50.....	2	9	14	20	26	16	13	4	1	..	..	..	..	..	..	105
50 to 55.....	2	4	10	7	10	20	10	14	1	..	..	..	..	..	..	78
55 to 60.....	1	1	....	11	....	12	5	15	7	2	1	..	..	..	..	55
60 to 65.....	.....	.....	2	....	10	6	10	8	5	3	1	..	..	..	..	45
65 to 70.....	.....	.....	1	2	2	3	3	4	4	5	3	..	..	..	..	27
70 to 75.....	.....	.....	....	3	....	1	2	1	2	4	4	1	..	..	..	18
75 to 80.....	.....	.....	....	....	1	..	..	..	..	1	2	2	..	..	..	6
Over 80.....	.....	.....	....	....	....	..	..	..	..	..	..	..	..	..	..	.....
Not stated....	.....	.....	....	....	....	..	..	..	..	..	..	..	..	..	13	13
No. of brides..	1,109	1,568	673	293	157	99	55	49	21	15	12	3	..	..	20	4,074

TABLE No. XII.

Instances in which the age of the bride exceeded that of the groom.	Second marriage.		Third marriage.		Fourth marriage.		Fifth marriage.		Sixth marriage.		Divorced.		No. of marriages in which both bride and groom had been divorced.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
666	675	493	73	41	9	3	1	...	1	...	86	90	14

DIVORCES.

TABLE No. XIII.

Divorces decreed by the Supreme Court of New Hampshire, in the year 1892, as returned by the Clerks of the Several Counties.

COUNTIES.	Causes of Divorce.																Libellants.		
	Conviction of crime and imprisonment.	Abandonment.	Abandonment and adultery.	Absent three years.	Adultery.	Desertion.	Extreme cruelty.	Extreme cruelty and willing absence.	Extreme cruelty and habitual drunkenness.	Habitual drunkenness and abandonment.	Habitual drunkenness.	Impotency.	Willing absence and refusal to cohabit.	Treatment injurious to health.	Nullity.	Treatment injurious to health and to reason.	Willing absence three years.	Males.	Females.	Total of each county.
Rockingham	....	16	....	....	6	....	7	....	....	....	4	....	....	....	....	....	....	12	21	33
Strafford	...	18	....	....	7	....	3	....	....	....	1	....	....	1	....	....	....	10	20	30
Belknap	....	7	....	3	8	....	8	....	....	....	1	....	....	....	....	....	....	7	20	27
Carroll	....	5	....	2	5	....	4	....	....	....	1	....	....	....	1	....	....	6	12	18
Merrimack	....	15	....	....	20	....	15	....	....	....	4	....	....	....	1	....	....	21	34	55
Hillsborough	....	37	1	9	10	....	25	1	1	....	1	....	....	4	....	....	....	24	65	89
Cheshire	....	10	....	....	9	....	7	....	....	....	....	....	....	4	....	2	....	7	25	32
Sullivan	....	2	....	....	2	....	3	....	....	....	1	....	....	....	....	....	....	2	6	8
Grafton	1	15	....	....	7	....	9	....	....	....	6	....	....	....	....	....	....	12	26	38
Coös	1	4	...	....	1	....	8	....	....	....	3	....	....	....	....	....	....	2	15	17
Total	2	129	1	14	75	....	89	1	1	....	22	....	....	9	2	2	....	103	244	347

TABLE No. XIV.

Causes upon which Divorces have been decreed for ten years, 1882 to 1892, inclusive, by Counties.

COUNTIES.	Abandonment.	Abandonment and adultery.	Absent three years.	Absent three years and abandonment.	Adultery.	Conviction of crime and imprisonment.	Desertion and bigamy.	Extreme cruelty.	Extreme cruelty and abandonment.	Extreme cruelty and adultery.	Extreme cruelty and habitual drunkenness.	Absence of wife from state ten years together.	Desertion.	Extreme cruelty, habitual drunkenness, and adultery.	Habitual drunkenness.	Habitual drunkenness and adultery.	Habitual drunkenness and desertion.	Impotency.	Joining religious sect and refusal to cohabit.	Nullity.	Prior marriage.	Refusal to cohabit.	Treatment injurious to health.	Treatment injurious to health and extreme cruelty.	Treatment injurious to health and to reason.	Treatment injurious to reason.	Willing absence three years.	Willing absence and refusal to cohabit.	No cause assigned.	Total.
Rockingham	154	..	1	....	87	4	..	98	....	..	1	....	..	....	44	....	....	1	....	....	..	....	3	....	....	....	..	....	..	396
Strafford	136	..	14	....	92	1	1	110	....	..	....	....	..	....	32	....	....	1	1	2	..	....	2	....	....	....	..	....	..	394
Belknap	61	..	14	....	74	2	..	78	....	..	....	....	..	....	25	....	....	....	....	....	..	....	2	....	....	....	..	....	..	259
Carroll	69	..	5	....	44	2	..	32	....	..	1	....	2	....	13	....	....	1	....	....	1	....	1	....	....	....	..	....	..	171
Merrimack	144	..	20	....	114	3	..	166	....	..	....	....	..	....	53	....	....	4	....	1	..	....	3	....	....	....	2	14	..	526
Hillsborough	367	4	25	....	193	6	..	296	3	4	14	....	..	1	60	2	2	....	....	....	..	....	13	1	....	1	..	1	6	999
Cheshire	125	1	1	3	73	....	..	80	1	3	6	1	..	....	20	....	....	1	....	1	..	....	12	....	4	....	..	5	..	337
Sullivan	56	..	..	....	56	....	..	63	....	..	....	....	..	....	5	....	....	1	....	....	..	....	2	....	....	....	..	8	..	192
Grafton	136	..	..	....	92	3	..	99	....	..	....	....	..	....	21	....	....	1	....	....	..	....	3	....	....	....	..	....	..	355
Coös	36	..	7	1	42	2	..	64	....	..	....	....	..	....	15	....	....	4	....	....	..	....	1	....	....	....	..	3	..	175
Total	1,284	5	87	4	867	23	1	1,086	4	7	22	1	2	1	288	2	2	14	1	4	1	1	40	1	5	2	41	6	2	3,804

TABLE

CAUSES OF DEATH ARRANGED

TOWNS IN ROCKINGHAM COUNTY.	CLASS I.—																								
	ORDER 1.—Miasmatic.																								
	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Atkinson	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..
Auburn	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Brentwood	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Candia	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Chester	..	..	..	..	2	1	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Danville	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Deerfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Derry	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
East Kingston	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Epping	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Exeter	..	..	..	5	..	..	..	..	1	1	..	..	..	..	1	..	..	..	3	..	..	..	..
Fremont	..	..	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greenland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hampstead	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Hampton	..	..	..	2	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
Hampton Falls	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kensington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Kingston	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Londonderry	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Newcastle	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Newington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Newmarket	..	..	..	10	..	2	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..
Newton	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..
North Hampton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Northwood	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	..	..	..	..
Nottingham	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	4	..	..	..	..
Plaistow	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Portsmouth	..	..	..	6	1	6	..	5	4	1	..	..	..	..	2	..	..	..	4	..	..	..	..
Raymond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Rye	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Salem	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..
Sandown	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Seabrook	..	..	..	1	..	1	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
South Hampton	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
South Newmarket	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Stratham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..
Windham	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Total	..	..	..	31	3	11	17	10	7	6	1	..	..	..	15	..	1	..	34	..	..	..	1

No. XV.

BY TOWNS AND COUNTIES.

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2—Enthetic. Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3.—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	2	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	....	..	2
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	3	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	....	..	3
..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	2	..	..	9	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	4	..	13
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	...
..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	3	..	..	..	..	..	1	..	1	...	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	...
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	7	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	10	..	17
..	..	..	..	...	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	..	..	..	...	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	16	13	..	..	..	..	2	..	1	1	1	..	..	..	1	..	..	..	..	..	..	18	14	..	32
..	1	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	2	1	..	3
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	1	..	..	4	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	....	..	4
..	..	..	..	...	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	5	..	..	10	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	6	..	16
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	...	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	10	..	..	76	71	..	..	..	..	3	..	2	1	2	..	..	..	2	..	..	..	..	..	..	80	72	..	152

TABLE No. XV.

TOWNS IN ROCKINGHAM COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																														
	ORDER 1.—Diathetic.															ORDER 2.—Tubercular.										Total for Class II.					
	Gout.		Dropsy.		Anæmia.		Cancer, Various.		Cancer of Breast.		Cancer of Stomach.		Cancer of Uterus.		Noma (Canker).		Mortification.		Rheumatism.		Total.			Scrofula.		Tabes Mesenterica.		Phthisis.		Hydrocephalus.		Tubercular Meningitis.		Total.			Male.		Female.		Total.
																					M.	F.										M.	F.						
Atkinson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	2	1	2	1	3
Auburn	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	..	1	1	2
Brentwood	..	3	..	..	3	..	..	..	..	..	..	..	..	..	1	..	..	..	2	5	..	..	..	..	..	..	6	..	..	..	..	2	4	4	9	13
Candia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	5	..	..	..	..	3	2	3	3	6
Chester	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	1	1	1	2
Danville	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	1
Deerfield	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	..	2	..	1	2	2	3	2	5		
Derry	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	..	..	..	..	..	..	7	..	..	4	3	6	4	10		
East Kingston	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	2	2		
Epping	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	10	..	1	6	5	7	6	13		
Exeter	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	8	..	..	3	5	3	6	9		
Fremont	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	6	..	..	3	3	4	3	7		
Greenland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Hampstead	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	1	2		
Hampton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	1	..	1		
Hampton Falls	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1		
Kensington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Kingston	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	1	1	2		
Londonderry	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	2	4	2	4	6		
Newcastle	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	1	1	2		
Newington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	..	1		
Newmarket	..	2	..	1	..	..	..	..	..	..	..	1	..	3	..	1	..	..	7	..	..	..	..	..	..	..	7	..	..	1	6	4	7	11		
Newton	..	..	..	..	..	..	2	1	..	..	..	..	..	1	..	2	..	..	5	..	..	..	..	..	..	..	5	..	..	3	2	4	4	8		
North Hampton	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1		
Northwood	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	5	..	..	..	..	..	..	..	5	..	..	4	1	4	2	6		
Nottingham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1		
Plaistow	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	..	1		
Portsmouth	..	..	..	2	..	1	2	..	..	3	..	..	..	8	..	..	..	..	37	..	..	18	19	18	27	45										
Raymond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1		
Rye	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	1	1	2		
Salem	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	6	..	..	4	2	4	3	7										
Sandown	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1		
Seabrook	..	1	1	3	..	..	..	..	..	..	..	..	1	4	..	2	..	..	1	..	..	..	..	..	..	..	4	4	8							
South Hampton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	1	..	1	1					
South Newmarket	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	2	2	2	2	4										
Stratham	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	2	2										
Windham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Total	..	10	3	16	..	5	3	1	4	6	17	31	1	3	133	..	2	69	70	86	101	187		

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.												Order 2.—Circulatory System.					Order 3.—Respiratory System.										
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain diseases.	Total.		Pericarditis.	Aneurism.	Heart Disease.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.								M.	F.
..	..	..	..	..	..	..	..	..	..	....	....	..	..	4	3	1	..	..	....	..	..	2	..	..	....	2
2	..	..	..	..	..	..	..	..	..	....	2	..	..	....	....	....	..	..	....	..	..	1	1	..	2	....
1	..	1	1	1	..	..	..	..	..	2	2	..	..	1	1	....	..	..	1	..	..	3	..	..	3	1
..	..	1	2	..	..	..	..	..	..	1	2	..	..	5	3	2	..	..	2	..	..	3	..	..	1	4
..	..	1	1	..	..	..	..	..	..	1	1	..	..	1	1	....	..	..	....	..	..	1	..	..	....	1
1	..	..	..	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
..	1	4	..	..	..	1	..	..	2	4	4	..	..	....	....	....	..	..	....	..	..	4	..	..	2	2
..	..	2	3	..	..	..	..	1	1	3	4	..	..	5	4	1	..	..	....	..	..	6	..	..	2	4
..	..	1	..	..	..	..	..	..	..	....	1	..	..	....	....	....	..	..	....	1	..	1	..	..	....	2
..	..	2	3	..	..	..	..	2	..	4	3	..	..	4	2	2	..	..	1	..	..	4	..	..	1	4
7	..	2	3	..	..	..	..	2	1	8	7	..	..	8	5	3	..	..	4	..	..	8	1	..	4	9
..	..	..	..	..	..	..	..	1	..	....	1	..	..	2	1	1	..	..	....	..	..	1	..	..	1	....
2	..	2	1	..	..	..	..	..	..	3	2	..	..	....	....	....	..	..	1	..	..	1	..	..	1	1
..	..	1	..	..	..	..	..	..	..	....	1	..	..	5	2	3	..	..	....	..	..	1	..	..	....	1
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
..	..	..	1	..	..	..	..	..	..	....	1	..	..	3	1	2	..	..	....	..	..	1	..	..	1	....
..	..	1	..	..	..	..	..	..	..	1	....	..	..	1	1	....	..	..	....	..	..	1	..	..	....	1
..	..	..	..	..	..	..	..	..	..	....	....	..	..	2	1	1	..	..	....	..	..	3	..	..	1	2
1	..	1	..	..	..	..	..	..	..	....	2	..	..	5	5	....	..	..	2	..	..	8	..	..	6	4
..	..	2	..	..	..	..	..	..	..	1	1	..	..	....	....	....	..	..	1	..	..	1	..	..	1	1
..	..	..	1	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1
1	..	..	2	..	..	..	..	..	..	....	3	..	..	8	4	4	..	..	....	..	..	4	..	..	1	3
1	..	..	..	1	..	..	..	..	..	....	2	..	..	5	3	2	..	..	....	1	..	1	..	..	2	....
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	4	..	..	....	4
..	..	1	1	..	..	..	..	..	..	2	....	..	..	3	2	1	..	..	....	1	..	3	..	..	....	4
..	..	1	1	..	..	..	..	..	..	....	2	..	..	2	1	1	..	..	2	..	..	3	..	..	1	4
..	..	..	1	..	..	..	..	..	..	1	....	..	..	2	1	1	..	..	1	..	..	....	..	..	1	....
3	1	8	1	..	..	..	4	2	8	11	..	..	..	19	11	8	..	..	....	4	1	12	2	..	8	11
..	..	2	..	..	..	1	..	1	2	2	..	..	..	3	2	1	..	..	1	..	..	3	..	..	1	3
1	..	1	..	..	..	..	..	..	..	....	2	..	..	1	....	1	..	..	....	..	..	2	..	..	....	2
2	..	3	3	..	..	..	..	..	1	7	2	..	..	2	1	1	..	..	1	..	..	5	..	1	4	3
1	..	..	..	..	..	..	..	..	..	....	1	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1
..	..	1	2	..	..	..	..	..	..	1	2	..	..	....	....	....	..	..	....	..	..	3	..	..	1	2
..	..	1	..	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	1	..	..	2	..	..	1	2
..	..	..	..	..	..	..	..	..	1	....	1	..	..	4	2	2	..	..	1	..	..	....	..	..	1	....
..	..	2	1	..	..	..	..	..	1	3	1	..	..	2	....	2	..	..	1	..	..	....	..	..	....	1
..	..	..	1	..	..	..	..	..	..	....	1	..	..	2	1	1	..	..	1	..	..	2	..	..	1	2
23	2	41	29	2	..	2	..	11	9	55	64	..	..	99	58	41	..	..	21	6	2	96	4	1	48	82

TABLE No. 15.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN ROCKINGHAM COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Disease.	Spleen Disease.	Bowel Disease.	Total. M.	Total. F.
Atkinson	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Auburn	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Brentwood	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Candia	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Chester	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Danville	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Deerfield	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Derry	..	....	....	....	..	..	..	..	..	..	..	..	....	....	2	..	....	2	....
East Kingston	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Epping	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	....	1
Exeter	2	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	1	1	3
Fremont	..	....	....	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	....
Greenland	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hampstead	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Hampton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hampton Falls	..	....	....	....	..	..	..	..	..	..	..	..	2	....	....	..	....	2	....
Kensington	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Kingston	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Londonderry	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Newcastle	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Newington	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Newmarket	..	....	1	....	..	..	..	..	..	..	..	..	....	....	1	..	....	....	2
Newton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
North Hampton	..	....	1	....	..	..	..	..	..	..	..	..	....	1	....	..	....	2	....
Northwood	..	....	1	....	..	..	..	..	..	1	..	..	....	....	....	..	....	1	1
Nottingham	..	....	....	...	..	..	..	..	..	..	..	..	....	....	1	..	....	1	....
Plaistow	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Portsmouth	4	3	2	....	..	1	..	..	..	..	..	..	1	....	1	..	2	3	11
Raymond	..	1	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	1
Rye	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Salem	..	....	1	....	..	..	..	..	..	..	..	..	1	....	....	..	....	2	....
Sandown	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Seabrook	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	2	....
South Hampton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
South Newmarket	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Stratham	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Windham	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Total	10	6	13	....	..	1	..	..	..	1	..	..	4	1	6	..	5	22	25

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.				Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.)	Cystitis.	Prostate, Disease of.	Kidney Disease.	Bladder, Disease of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.	Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.											M.	F.				
1	..	2	..	..	..	..	..	..	..	1	2	...	...	...	..	..	..	...	..	..	..	...	...	4	5	..	9
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	1	..	..	...	1	2	3	..	5
..	..	2	..	..	..	..	..	..	..	1	1	...	...	...	..	..	..	...	..	..	..	...	...	7	5	..	12
..	..	1	1	..	..	..	1	..	..	1	2	...	...	...	..	..	..	...	..	..	..	...	...	6	11	..	17
2	..	..	..	..	..	..	..	..	..	...	2	...	...	...	..	..	..	...	..	..	..	...	...	2	4	..	6
1	..	..	1	..	..	..	..	..	..	1	1	...	...	...	..	..	..	...	..	..	..	...	...	2	1	..	3
..	..	1	1	..	..	..	..	..	..	2	...	...	...	...	..	..	..	...	..	..	..	...	...	9	6	..	15
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	11	9	..	20
1	..	..	..	..	..	..	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	1	4	..	5
1	..	..	..	..	..	2	1	..	..	3	1	...	...	...	..	..	..	...	..	..	..	...	...	10	11	..	21
..	..	3	1	..	..	..	..	..	..	4	...	...	...	...	..	..	..	...	..	..	..	...	...	22	22	..	44
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	3	2	..	5
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	4	3	..	7
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	3	5	..	8
..	..	1	..	..	..	..	..	..	..	...	1	...	...	...	1	..	..	1	..	..	..	...	...	...	1	..	1
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	4	3	..	7
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	2	2	..	4
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	3	3	..	6
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	12	6	..	18
..	..	1	..	..	..	..	..	..	..	...	1	...	...	...	..	..	..	...	..	..	..	...	...	3	4	..	7
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	1	1	..	2
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	6	12	..	18
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	5	4	..	9
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	3	4	..	7
..	..	1	..	..	..	..	1	..	..	1	1	...	...	...	..	..	..	...	..	..	..	...	...	6	7	..	13
..	..	..	..	..	..	1	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	4	7	..	11
1	..	..	..	..	..	..	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	4	1	..	5
1	..	4	..	..	1	..	1	..	..	5	2	...	...	...	..	..	..	...	1	..	..	...	1	35	44	..	79
..	..	1	..	..	..	..	..	..	..	...	1	...	...	...	..	..	..	...	..	..	..	...	...	6	8	..	14
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	...	5	..	5
..	..	1	..	..	1	..	..	..	..	2	1	...	...	...	..	..	..	...	..	..	..	...	...	15	7	..	22
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	...	2	..	2
1	..	1	..	..	1	..	..	..	..	1	...	1	...	1	..	..	..	...	..	..	..	...	...	6	5	..	11
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	3	3	..	6
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	..	..	..	...	..	..	..	...	...	4	3	..	7
..	..	1	..	..	..	..	..	..	..	...	1	...	...	...	..	..	..	...	..	..	..	...	...	3	5	..	8
..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	..	..	..	...	..	..	..	...	...	2	5	..	7
9	..	24	4	..	3	3	4	..	..	29	18	1	...	1	1	..	..	1	2	..	..	...	2	213	233	..	446

TABLE No. XV.

TOWNS IN ROCKINGHAM COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																					
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Inmutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Atkinson	..	..	..	..	..	..	..	..	....	....	..	..	....	3	2	....	....	3	2	5
Auburn	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Brentwood	..	..	1	..	..	..	..	..	1	....	..	..	....	2	....	1	....	4	....	4
Candia	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Chester	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Danville	..	..	..	..	..	..	..	..	....	....	..	..	....	2	2	....	....	2	2	4
Deerfield	..	..	1	..	..	..	..	..	....	1	..	..	....	2	....	....	....	2	1	3
Derry	1	..	..	..	..	..	..	7	7	1	..	..	....	1	2	....	....	8	3	11
East Kingston	..	..	..	..	..	..	..	..	....	....	..	..	....	3	....	....	....	3	....	3
Epping	1	..	3	..	1	..	..	2	3	4	..	..	....	....	1	....	....	3	5	8
Exeter	2	..	..	..	..	1	..	1	4	....	..	..	....	....	2	....	....	4	2	6
Fremont	..	..	2	..	..	..	..	..	....	2	..	..	....	....	....	....	....	....	2	2
Greenland	..	..	..	..	..	..	..	..	....	....	1	..	1	....	1	....	....	....	2	2
Hampstead	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Hampton	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Hampton Falls	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Kensington	..	..	1	..	..	..	..	..	1	....	..	..	....	1	....	....	....	2	....	2
Kingston	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Londonderry	1	..	..	..	..	..	..	..	....	1	..	..	....	....	....	1	....	1	1	2
Newcastle	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Newington	..	..	1	..	..	..	..	..	1	....	..	..	....	....	1	....	....	1	1	2
Newmarket	5	..	..	..	..	..	..	..	4	1	1	..	1	....	6	....	....	4	8	12
Newton	..	..	..	..	..	..	..	..	....	....	..	..	....	4	....	....	....	4	....	4
North Hampton	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Northwood	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Nottingham	1	..	..	..	..	..	..	..	....	1	..	..	....	1	1	....	....	1	2	3
Plaistow	..	1	..	..	..	..	..	..	....	1	..	..	....	....	1	....	....	....	2	2
Portsmouth	8	1	2	..	..	..	..	3	9	5	..	..	....	6	8	...	1	15	14	29
Raymond	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	1	....	1	....	1
Rye	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	2	1	2	3
Salem	..	..	2	..	..	..	..	..	2	....	..	..	....	3	....	....	....	5	....	5
Sandown	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Seabrook	1	..	..	..	..	..	..	2	2	1	..	..	....	....	....	....	....	2	1	3
South Hampton	..	..	..	..	..	1	..	..	....	1	..	..	....	....	....	....	....	....	1	1
So. Newmarket	1	..	..	..	..	..	..	..	....	1	..	..	....	1	3	...	1	1	5	6
Stratham	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Windham	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Total	21	2	13	..	1	2	..	15	34	20	2	..	2	35	34	3	4	72	60	132

—Continued.

CLASS V.—VIOLENT DEATHS. Order 1.—Accident and Negligence.									Order 2.		Order 3.—Suicide.									Order 4.—Various.				Total for Class V.			Grand Total for all Classes.			
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total. M.	Total. F.	Homicide. M.	Homicide. F.	Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total. M.	Total. F.	Violent, not Classed. M.	Violent, not Classed. F.	Cause not Reported or Unclassified. M.	Cause not Reported or Unclassified. F.	Male.	Female.	Total.	Male.	Female.	Not stated.	Total.
																						1		1		1	12	10		22
																											5	5		10
																											16	14		30
		1					1															1	2	2	2	4	13	18		31
																1		1						1		1	8	9		17
						1	1																	1		1	6	4		10
																				1		3	4	4	4	8	19	14		33
																						2	1	2	1	3	29	17	*1	47
2						1	2	1															1	2	2	4	6	9		15
				1		1	2										1	1					1	3	1	4	24	24		48
1						2	3															2	3	5	3	8	43	37		80
																				1			1	1	1	2	10	9		19
																											4	5		9
																											5	7		12
																						1	1	1	1	2	5	6		11
																	1	1				1		2		2	6	5		11
																						1	2	1	2	3	5	5		10
																						1		1		1	6	4		10
						1	1															2		3		3	19	13		32
																											4	6		10
																	1	1					1	1	1	2	4	3		7
1	2			3			5	1	1													4	1	10	2	12	32	39		71
																							2		2	2	13	12		25
																											3	6		9
	1						1																	1		1	12	12		24
1							1															1	1	2	1	3	10	13		23
																											7	4		11
1				6		3	9	1														11	4	20	5	25	106	104		210
1							1															1		2		2	11	10		21
																						1	1	1	1	2	4	10		14
1		1			1		1	2														1		2	2	4	30	12		42
	1						1															1		2		2	3	4		7
						1	1															1	2	2	2	4	23	18	*1	42
																											4	5		9
																											8	10		18
																						2	1	2	1	3	7	10		17
																											2	7		9
8	4	2	..	10	1	10	30	5	1	...	...	...	...	...	...	1	3	4	...	2	...	38	29	75	34	109	524	500	2	1,026

* Classed with males.

TABLE No. XV.

CLASS I.

ORDER 1.—Miasmatic.

TOWNS IN STRAFFORD COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Barrington	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dover	..	..	..	18	..	4	6	5	2	..	..	2	..	..	5	..	..	..	13	..	..	..	3
Durham	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Farmington	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..	..	..	1
Lee	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Madbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Middleton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Milton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
New Durham	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Rochester	..	..	..	5	..	..	8	2	1	1	..	1	..	..	..	..	..	..	2	1	..	..	5
Rollinsford	..	..	..	1	..	1	1	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	3
Somersworth	..	..	..	11	..	3	1	2	..	1	..	..	..	..	3	..	..	..	2	..	..	1	2
Strafford	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	1
Total	..	..	..	36	..	8	18	10	4	4	..	3	..	..	11	..	..	..	30	1	..	1	15

—Continued.

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2—Enthetic. Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3.—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	2	..	..	32	28	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	32	28	..	60
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	2	2	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	12	14	..	..	..	..	1	..	..	1	1	..	..	..	1	..	..	..	..	..	..	13	15	..	28
..	1	..	..	2	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	8	..	10
..	..	..	..	12	14	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	13	14	..	27
..	1	..	..	4	1	..	..	..	..	1	..	..	1	..	..	..	1	..	1	..	..	..	..	..	4	3	..	7
..	4	..	..	71	74	..	..	..	..	4	..	2	2	2	..	..	1	2	1	..	..	..	..	..	75	77	..	152

TABLE No. XV.

TOWNS IN STRAFFORD COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																					
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Barrington						1			1		2				1			1		3		3
Dover		5	7	7							5	14	1		37		3	12	29	17	43	60
Durham				2								2			1				1		3	3
Farmington						1						1			4			3	1	3	2	5
Lee															1			1		1		1
Madbury															2				2		2	2
Middleton				1								1			1			1		1	1	2
Milton				1								1									1	1
New Durham								1				1			2				2		3	3
Rochester		1		1		1			2		3	2			13	1	1	7	8	10	10	20
Rollinsford			1	1							1	1			5			3	2	4	3	7
Somersworth		1		2					1		3	1		1	16			5	12	8	13	21
Strafford				1		1					2				1			1		3		3
Total	..	7	8	16	..	4	..	1	4	..	16	24	1	1	84	1	4	34	57	50	81	131

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.													Order 2.—Circulatory System.						Order 3.—Respiratory System.											
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.			Pericarditis.	Aneurism.	Heart Diseases.	Total.			Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.		
										M.	F.					M.	F.										M.	F.	
1	..	3	..	..	..	..	..	..	..	2	2	..	..	..	3	....	3	..	..	2	..	....	2	..	..	1	3	
11	1	9	2	1	..	2	..	5	8	20	19	..	..	..	35	18	17	..	..	2	3	....	30	1	..	15	21	
..	..	..	1	1	..	..	..	..	..	1	1	..	..	..	7	3	4	..	..	..	2	....	2	1	..	4	1	
3	2	1	5	..	..	..	..	..	1	1	11	..	..	..	4	2	2	..	..	1	..	1	8	..	..	4	6	
..	..	..	1	..	..	..	..	..	..	1	....	..	..	..	....	....	....	..	..	..	..	....	1	..	..	....	1	
..	..	..	..	..	..	..	..	..	1	1	....	..	..	..	....	....	....	..	..	..	..	....	2	..	..	1	1	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	....	....	....	..	..	..	..	....	1	..	..	1	....	
..	..	..	1	..	..	..	..	..	..	....	1	..	..	..	3	2	1	..	..	1	..	....	3	..	..	2	2	
..	..	..	..	..	..	..	..	..	2	2	....	..	..	..	1	1	....	..	..	..	..	....	1	..	..	1	....	
1	..	4	4	..	..	..	..	2	2	8	5	..	..	..	8	3	5	..	1	3	1	2	16	1	1	9	16	
1	..	3	1	..	..	..	..	1	..	2	4	..	..	..	3	1	2	..	..	2	1	....	9	..	..	7	5	
4	..	..	2	..	..	1	..	2	..	4	5	..	..	..	3	....	3	..	1	1	..	....	13	..	..	3	12	
..	..	1	..	..	..	..	..	..	..	1	....	..	..	..	2	2	....	..	..	1	..	....	8	..	..	3	6	
21	3	21	17	2	..	3	..	10	14	43	48	..	..	..	69	32	37	..	2	13	7	3	96	3	1	51	74	

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN STRAFFORD COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Disease.	Spleen Disease.	Bowel Disease.	Total. M.	Total. F.
Barrington	..	....	3	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	3
Dover	3	2	5	....	..	..	..	..	..	..	5	..	1	....	....	..	4	8	12
Durham	..	....	....	....	..	..	..	..	..	..	..	..	....	1	....	....	....	....	1
Farmington	..	....	6	....	..	..	..	..	..	..	..	..	....	....	....	..	....	3	3
Lee	..	....	2	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	2
Madbury	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Middleton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Milton	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	....
New Durham	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	....
Rochester	4	3	3	....	..	2	..	..	..	..	2	..	....	1	....	..	....	8	7
Rollinsford	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Somersworth	..	1	....	....	..	..	..	..	..	..	1	..	1	....	1	..	....	2	2
Strafford	..	1	....	....	..	..	..	..	..	..	..	..	....	....	1	..	....	2	....
Total	7	7	20	....	..	2	..	..	..	..	11	..	2	2	2	..	4	26	31

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.													Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.						Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.			Ovarian Dropsy.	Disease of Uterus.	Total.	Bone, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.			Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.								M.	F.					M.	F.				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	11	..	15
1	..	8	..	..	..	..	1	..	..	8	2	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1	70	72	..	142
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	7	..	15
1	..	4	1	..	..	..	..	..	..	4	2	..	1	1	..	1	..	1	..	..	..	..	..	..	..	15	25	..	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	1	..	..	1	..	..	..	..	1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	6	6	..	12
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	..	6
..	..	..	..	..	2	..	..	1	..	3	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	1	31	35	..	66
..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	11	..	23
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	9	23	..	32
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	6	..	14
2	..	17	1	..	3	..	1	1	..	19	6	1	1	2	1	1	..	1	1	3	..	1	1	3	173	202	..	375

TABLE No. XV.

TOWNS IN STRAFFORD COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																				
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.			
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Barrington	..	1	..	..	..	..	..	1	1	1	..	..	....	4	6	....	....	5	7	12
Dover	8	7	4	..	1	4	..	6	19	11	..	..	....	5	11	1	1	25	23	48
Durham	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Farmington	1	1	..	..	..	..	..	..	1	1	..	..	....	....	3	1	....	2	4	6
Lee	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Madbury	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Middleton	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Milton	..	..	..	..	..	..	..	2	2	....	..	..	....	1	2	....	....	3	2	5
New Durham	..	1	..	..	..	..	..	..	....	1	..	..	....	....	2	....	....	....	3	3
Rochester	..	2	..	1	1	..	..	2	1	5	1	..	1	1	4	....	....	2	10	12
Rollinsford	..	2	..	..	..	1	1	..	3	1	..	..	....	....	1	....	....	3	2	5
Somersworth	8	4	7	1	..	..	..	..	9	11	..	..	....	2	2	1	....	12	13	25
Strafford	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	1	....	1	....	1
Total	17	18	11	2	2	5	1	11	36	31	1	..	1	13	32	4	1	53	65	118

—*Continued.*

CLASS V.—VIOLENT DEATHS.																																Grand Total for all Classes.
Order 1.—Accident and Negligence.										Order 2.		Order 3.—Suicide.										Order 4.—Various.				Total for Class V.						
Fracture and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.			Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.		Causes not Reported or Unclassified.		Male.	Female.	Total.						
							M.	F.											M.	F.													
																								3	1	3	1	4	16	21	..	37
1	..	..	..	5	..	6	11	1	..	..	..	..	1	..	..	..	1	..	2	..	..	..	..	4	3	17	4	21	161	170	..	331
						2	2																	2	..	4	..	4	14	13	..	27
															1					1				1	5	1	6	7	24	39	..	63
						2	2																	2	1	4	1	5	7	5	..	12
																									1	..	1	1	4	5	..	9
																													3	2	..	5
1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	1	3	12	10	..	22
																													6	8	..	14
				..	1	..	4	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	6	2	8	62	72	..	134
				..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	23	24	..	47
				2	..	1	2	1	..	..	..	1	..	..	..	1	1	3	..	..	..	..	..	14	12	19	13	32	61	76	..	137
																									1	..	1	1	16	10	..	26
2	..	..	..	8	..	16	22	4	..	..	..	2	..	1	..	2	1	5	1	..	..	..	..	31	25	58	30	88	409	455	..	864

TABLE No. XV.

TOWNS IN BELKNAP COUNTY.	CLASS I.— Order 1.—Miasmatic.																								
	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Alton	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Barnstead	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	5	..	..	..	..
Belmont	..	..	..	2	..	2	3	..	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..
Centre Harbor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gilford	..	..	..	5	..	1	3	2	1	..	..	1	..	..	..	..	..	..	1	..	..	1	..
Gilmanton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Laconia	..	..	..	7	..	4	16	2	2	..	..	..	..	..	1	..	..	..	4	..	..	..	..
Meredith	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	..
New Hampton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Sanbornton	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Tilton	..	..	..	..	..	..	7	..	..	..	..	1	..	..	..	..	..	..	3	..	..	..	..
Total	..	..	..	15	..	7	29	5	3	1	..	2	..	..	4	..	..	..	20	1	..	1	..

—*Continued.*

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2.—Enthetic. Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	6
1	..	..	..	8	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	3	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	6	9	..	..	..	..	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	7	10	..	17
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	17	19	..	..	..	..	3	1	3	1	..	..	..	..	..	..	..	..	..	..	..	20	20	..	40
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	6	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
2	..	..	..	42	48	..	..	..	..	5	1	4	2	..	..	..	..	..	..	..	..	..	..	..	46	50	..	96

TABLE No. XV.

TOWNS IN BELKNAP COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																								
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.								Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.			Male.	Female.	Total.
											M.	F.						M.	F.					
Alton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	1	1	1	2		
Barnstead	..	2	1	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	1	2	3	
Belmont	..	..	..	1	..	..	1	..	1	..	1	2	..	..	..	4	..	..	1	3	2	5	7		
Centre Harbor	..	..	..	1	..	1	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	2		
Gilford	..	1	..	1	..	..	..	..	1	..	2	1	..	..	..	6	..	..	2	4	4	5	9		
Gilmanton	..	..	..	2	..	..	..	..	..	..	1	1	..	..	..	3	..	..	2	1	3	2	5		
Laconia	..	..	1	5	..	1	..	..	..	..	1	6	..	..	..	10	1	..	5	6	6	12	18		
Meredith	..	..	..	1	..	2	..	..	..	..	2	1	..	..	..	1	..	..	..	1	2	2	4		
New Hampton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	2	1	2	3		
Sanbornton	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	4	..	..	..	4	..	5	5		
Tilton	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	2	..	..	1	1	2	1	3		
Total	..	3	3	12	..	4	1	..	2	..	9	16	..	..	..	35	1	..	13	23	22	39	61		

—Continued.

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.													Order 2.—Circulatory System.					Order 3.—Respiratory System.										
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain diseases.	Total.			Pericarditis.	Aneurism.	Heart Disease.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.					M.	F.									M.	F.
..	..	..	4	..	..	1	..	..	..	2	3		1	..	3	2	2	..	..	....	..	..	5	..	..	3	2
..	..	..	..	1	..	..	..	..	..	....	1		..	..	8	1	7	..	..	....	..	..	2	..	..	....	2
..	..	..	1	..	..	..	..	..	..	1	....		..	..	1	1	....	..	..	....	..	..	5	..	..	1	4
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	....	..	..	1	..	..	....	1
1	..	1	2	..	..	..	..	1	2	6	1		..	..	3	1	2	..	..	....	..	..	7	..	1	2	6
1	..	1	2	..	..	..	..	..	..	1	3		1	..	1	1	1	..	..	1	1	..	7	..	..	3	6
4	..	1	8	..	..	1	..	..	1	9	6		..	..	8	4	4	..	..	....	..	..	15	..	1	8	8
..	..	..	1	1	..	1	..	..	1	2	2		..	..	4	3	1	..	..	....	..	..	5	..	..	4	1
1	..	3	1	..	..	..	..	..	..	5	....		..	..	2	2	....	..	..	1	..	..	3	..	..	1	3
..	..	2	2	..	..	..	..	..	..	1	3		..	..	2	2	....	..	..	....	..	..	4	..	..	1	3
1	..	1	..	..	..	1	1	..	..	2	2		..	..	1	1	....	..	..	....	..	..	1	..	..	....	1
8	..	9	21	2	..	4	1	1	4	29	21		2	..	33	18	17	..	..	2	1	..	55	..	2	23	37

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN BELKNAP COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Alton	..	....	....	....	..	..	1	..	..	..	1	..	....	....	....	..	....	1	1
Barnstead	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	....	2
Belmont	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Centre Harbor	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Gilford	..	3	....	....	..	..	1	..	..	..	..	..	....	....	....	..	....	3	1
Gilmanton	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	....
Laconia	..	....	2	....	..	..	..	..	..	..	..	..	....	....	1	1	....	2	2
Meredith	..	1	2	....	..	..	..	..	..	..	1	..	....	....	....	..	1	2	3
New Hampton	..	2	....	....	..	..	..	..	..	..	..	..	....	....	1	..	1	3	1
Sanbornton	..	....	2	...	..	..	..	..	..	..	..	..	....	....	....	..	....	1	1
Tilton	..	1	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	....	2
Total	2	7	7	....	..	..	2	..	..	..	4	..	....	....	2	1	3	14	14

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.				Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bone, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.	Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.			M.	F.				
1	..	..	..	..	..	..	2	..	..	2	1	...	...	...	...	...	...	...	...	...	...	...	...	10	9	..	19
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	...	...	1	12	..	13
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5	4	..	9
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	2	..	2
1	..	2	1	..	..	1	..	1	..	2	4	...	...	...	...	...	...	...	...	...	...	...	...	14	14	..	28
..	..	..	..	..	..	..	1	..	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	7	10	..	17
..	..	3	2	..	..	1	1	..	..	3	4	...	...	...	...	...	...	...	...	...	...	...	...	26	24	..	50
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	...	...	11	7	..	18
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	12	4	..	16
..	..	..	..	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	...	...	...	5	7	..	12
..	..	1	..	..	..	..	..	..	..	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4	5	..	9
2	..	8	3	..	1	2	4	..	..	11	9	...	...	...	...	...	...	...	...	...	...	...	...	95	98	..	193

TABLE No. XV.

TOWNS IN BELKNAP COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																		
	ORDER 1.—Of Children.									ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Inmutrition.	Total.				Old Age.		Atrophy and Debility.				
									M.	F.	Childbirth.	Paramenia.	Total.	M.	F.	M.	F.	Male.	Female.	Total.
Alton	..	..	..	..	..	..	..	..	..	..	..	..	..	6	1	..	..	6	1	7
Barnstead	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	2	1	3
Belmont	1	..	..	..	..	..	..	1	1	1	..	..	..	1	2	..	1	2	4	6
Centre Harbor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	3	3
Gilford	3	2	1	..	..	..	..	..	3	3	..	..	..	1	1	1	1	5	5	10
Gilmanton	1	..	..	..	..	..	..	..	1	..	..	..	..	..	3	..	..	1	3	4
Laconia	1	3	1	..	1	..	..	..	4	2	..	..	..	1	1	1	1	6	4	10
Meredith	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	1	..	3	3
New Hampton	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2
Sanbornton	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	..	2	2	4
Tilton	1	..	..	..	..	1	..	..	1	1	..	..	..	..	1	..	..	1	2	3
Total	7	5	2	..	1	1	..	1	10	7	1	..	1	13	17	3	4	26	29	55

—*Continued.*

CLASS V.—VIOLENT DEATHS.																																Grand Total for all Classes.
Order 1.—Accident and Negligence.											Order 2.			Order 3.—Suicide.										Order 4.—Various.				Total for Class V.						
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.				Homicide.			Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.			Cause not Reported or Unclassified.		Male.	Female.	Total.						
							M.	F.			M.	F.		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.								
											1									2	2							1	3	1	4	20	13	..	33
																												1		1	1	4	22	..	26
																			1		1								1		1	18	16	..	34
																												1		1	1		8	..	8
			1				1												1	1	2							1	3	1	4	33	35	..	68
			1				1																					2	2	3	2	5	16	18	..	34
			2				2												1		1							4	4	7	4	11	65	64	..	129
1				2			3							1															3	1	4	17	15	..	32
				1			1																					1	1	1	2	16	9	..	25
																																8	15	..	23
1				1			1	1																				1	1	2	14	14	..	28
2			5	..	3		9	1	1	1							2	4	6						6	11	22	13	35	211	229	..	440

TABLE No. XV.

CLASS I.

ORDER 1.—Miasmatic.

TOWNS IN CARROLL COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Albany	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Bartlett	..	..	..	2	..	....	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Brookfield	..	..	..	....	..	....	1	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Chatham	..	..	..	....	..	....	....	1	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Conway	..	..	..	2	..	1	....	1	....	1	..	1	..	..	1	..	..	..	1	..	..	..	..
Eaton	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Effingham	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Freedom	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Hart's Loca'n	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Jackson	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Madison	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Moultonboro'	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Ossipee	..	..	..	1	..	....	....	....	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Sandwich	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	2	..	..	..	..
Tamworth	..	..	..	....	..	....	....	....	....	1	..	..	..	..	..	..	..	..	2	..	..	..	..
Tuftonboro'	..	..	..	1	..	....	1	....	....	....	..	..	..	..	1	..	..	..	1	..	..	..	..
Wakefield	..	..	..	2	..	1	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Wolfeboro'	..	..	..	1	..	....	....	....	1	....	..	..	..	..	..	..	..	..	3	..	..	..	..
Total	..	..	..	9	..	2	2	2	1	3	..	1	..	..	2	..	..	..	15	..	..	..	..

—*Continued.*

ZYMOTIC DISEASES.

						Order 2—Enthetic.								Order 3.—Dietic.						Order 4.—Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	3
...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	2
...	...	...	...	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	6	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
...	...	...	...	1	1	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	3
...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2
...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3
...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	4
...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	4
...	...	...	...	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	...	5
...	...	...	...	14	23	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	15	23	...	38

TABLE No. XV.

TOWNS IN CARROLL COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.								Total for for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.		Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.						M.	F.			
Albany	..	1	..	..	..	..	..	..	..	..	....	1	..	..	1	..	..	1	....	1	1	2
Bartlett	..	..	..	..	..	..	..	..	..	..	....	....	..	..	3	1	..	3	1	3	1	4
Brookfield	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	....	....	....	....	....
Chatham	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	....	....	....	....	....
Conway	..	..	1	..	..	..	1	..	..	..	....	2	1	..	3	..	..	1	3	1	5	6
Eaton	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	..	1	....	1	....	1
Effingham	..	..	..	..	..	..	..	..	..	..	....	....	..	..	4	..	..	2	2	2	2	4
Freedom	..	..	..	..	..	..	..	..	..	..	....	....	1	..	..	..	..	....	1	....	1	1
Hart's Locat'n	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	....	....	....	....	....
Jackson	..	..	..	1	..	..	..	..	..	..	1	....	..	..	..	..	..	....	....	1	....	1
Madison	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	..	....	1	....	1	1
Moultonboro'	..	..	..	1	..	..	..	..	..	..	1	....	..	..	2	..	..	....	2	1	2	3
Ossipee	..	..	1	1	..	1	..	..	..	1	1	3	..	..	6	..	..	2	4	3	7	10
Sandwich	..	..	..	..	..	..	..	..	..	..	....	....	..	..	3	..	..	2	1	2	1	3
Tamworth	..	..	..	2	..	1	..	..	..	..	1	2	..	..	2	..	..	....	2	1	4	5
Tuftonboro'	..	..	..	..	..	..	..	..	..	..	....	....	..	..	2	..	1	1	2	1	2	3
Wakefield	..	..	..	1	..	1	..	..	..	..	2	....	..	..	2	..	..	2	....	4	....	4
Wolfeborough	..	..	..	..	..	..	1	..	..	..	....	1	..	..	6	..	1	4	3	4	4	8
Total	..	1	2	6	..	3	2	..	..	1	6	9	2	..	36	1	2	19	22	25	31	56

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.												Order 2.—Circulatory System.					Order 3.—Respiratory System.										
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.		Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
..	..	1	..	..	..	..	..	..	..	....	1	..	..	....	....	....	..	..	..	..	....	....	....	....	....	....
1	..	1	..	..	..	..	..	..	..	1	1	..	..	....	....	....	..	..	1	..	....	5	..	..	3	3
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	1	..	....	....	....	....	1	....
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	..	..	....	....	....	....	....	....
2	..	3	2	..	..	1	..	..	1	3	6	..	..	3	3	....	..	..	..	..	....	9	..	..	4	5
..	..	..	1	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	..	..	....	2	..	..	1	1
..	..	1	2	..	..	..	..	..	..	1	2	..	..	1	1	....	..	..	..	..	....	5	..	..	2	3
1	..	1	..	..	..	..	..	..	..	1	1	..	..	....	....	....	..	..	..	..	....	1	..	..	1	....
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	..	..	....	....	....	....	....	....
..	..	..	..	..	..	..	..	1	..	1	....	..	..	....	....	....	..	..	2	..	....	2	..	..	1	3
..	..	1	..	..	..	..	..	..	..	1	....	..	..	1	1	....	..	..	..	..	....	2	..	..	....	2
1	..	3	..	..	..	..	..	..	..	1	3	..	..	4	3	1	..	..	1	..	....	2	..	..	1	2
..	..	1	..	1	..	..	..	..	..	....	2	..	..	2	2	....	..	..	1	..	1	3	..	1	6	....
..	..	4	1	..	..	..	..	..	..	....	5	..	..	4	2	2	..	..	..	1	....	5	..	..	3	3
..	..	1	..	..	..	..	..	..	1	1	1	..	..	2	....	2	..	..	..	..	....	1	..	1	1	1
..	..	..	..	..	..	..	..	..	1	1	....	..	..	2	1	1	..	..	..	..	....	5	..	1	4	2
1	..	1	2	..	..	..	..	1	..	3	2	..	..	5	5	....	..	..	..	1	....	4	..	..	2	3
1	..	1	2	1	..	..	..	..	3	6	2	..	..	1	1	....	..	..	2	..	....	4	..	..	4	2
7	..	19	10	2	..	1	..	2	6	21	26	..	..	25	19	6	..	..	8	2	1	50	..	3	34	30

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN CARROLL COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Disease.	Spleen Disease.	Bowel Disease.	Total.	
																		M.	F.
Albany	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Bartlett	..	....	....	....	..	1	..	..	..	..	1	..	....	....	....	..	....	2	....
Brookfield	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Chatham	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Conway	..	....	....	....	..	..	..	..	..	..	1	..	1	....	....	..	2	2	2
Eaton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Effingham	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	..	1
Freedom	1	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	1
Hart's Location	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Jackson	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Madison	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Moultonborough	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Ossipee	1	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	1	1	2
Sandwich	..	2	....	....	..	..	..	..	..	..	..	..	....	....	1	..	....	2	1
Tamworth	..	....	1	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	1
Tuftonborough	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Wakefield	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Wolfeborough	1	1	....	....	..	..	1	..	..	..	..	..	....	....	2	..	1	1	5
Total	6	4	1	....	..	1	1	..	..	..	3	..	1	....	4	..	4	10	15

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.					Order 8.—Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.)	Cystitis.	Prostate, Disease of.	Kidney Disease.	Bladder, Disease of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.				M.	F.				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	1	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	4	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	13	14	..	27
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	6	..	10
..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	7	..	12
..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	4	..	14
..	..	..	1	..	1	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	8	12	..	20
..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
..	..	1	1	..	..	..	2	..	..	3	1	..	1	1	..	..	..	..	..	..	..	..	..	..	13	7	..	20
..	..	1	2	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	9	..	24
..	..	4	7	..	2	..	3	1	..	13	4	..	2	2	..	..	..	..	..	..	..	..	..	..	97	83	..	180

TABLE No. XV.

TOWNS IN CARROLL COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																			
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Inutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Albany																				
Bartlett																				
Brookfield																				
Chatham											1		1						1	1
Conway				1					1						2			1	2	3
Eaton																				
Effingham															1				1	1
Freedom																1		1		1
Hart's Location			3						3									3		3
Jackson																				
Madison																				
Moultonboro'											1		1		1		1		3	3
Ossipee		1								1							1		2	2
Sandwich														1				1		1
Tamworth																				
Tuftonborough			2					1	1	2					1	1		2	3	5
Wakefield														3	1			3	1	4
Wolfeborough	2							1	3					1	2			4	2	6
Total	2	1	5	1				2	8	3	2		2	5	8	2	2	15	15	30

-*Continued.*

CLASS V.—VIOLENT DEATHS.																												Grand Total for all Classes.			
ORDER 1.—Accident and Negligence.									ORDER 2.		ORDER 3.—Suicide.										ORDER 4.—Various.				Total for Class V.							
Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.			Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.					
						M.	F.		M.	F.								M.	F.				M.	F.								
																		1	1				1		3		3	15	7	..	22
																		1	1						1		1	3	1	..	4
																							1		1		1	2	2	..	4
1						1																	4		5		5	22	27	..	49
																												3	1	..	4
1						1																			1		1	7	9	..	16
																		2	1				2	1	3			7	5	..	12
																												3			3
																		1					1		1		1	4	4	..	8
																		1					1		1		1	3	3	..	6
																												6	13	..	19
																		6	1		6	1	7					21	15	..	36
1				1		1	3																		3		3	14	15	..	29
						1	1																1		1		1	6	12	..	18
																		2	1		2	1	3					14	12	..	26
						1	1											1			2		2					25	9	..	34
						1	1											1	4		2	4	6					27	22	..	49
3			2			4	9											2	2				20	7	31	7	38	183	159	..	342

TABLE No. XV.

CLASS I.—

ORDER 1.—Miasmatic.

TOWNS IN MERRIMACK COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Allenstown	..	..	..	7	1	1	4	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Andover	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Boscawen	..	..	..	2	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
Bow	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Bradford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..
Chichester	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
Concord	..	..	..	20	1	..	3	2	2	3	..	1	..	..	2	..	..	..	14	..	..	1	2
Danbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
Dunbarton	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Epsom	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Franklin	..	..	..	3	..	1	3	..	..	..	..	..	..	..	3	..	..	..	2	..	..	..	..
Henniker	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	..
Hill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Hooksett	..	..	..	1	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Hopkinton	..	..	..	1	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
Loudon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
New London	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northfield	..	..	..	..	..	..	3	..	..	..	..	1	..	..	..	..	..	..	1	..	..	1	..
Pembroke	..	..	..	7	..	1	3	..	1	..	..	..	..	..	1	..	..	..	2	..	..	..	..
Pittsfield	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..
Salisbury	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Sutton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Warner	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	..
Webster	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wilmot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	44	2	5	20	2	4	8	..	3	..	..	10	..	1	..	42	2	..	2	3

—*Continued.*

ZYMOTIC DISEASES.

						Order 2.—Enthetic.									Order 3—Dietic.						Order 4.—Parasitic.						Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.			Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.		Aphthæ.	Worms.	Other Parasites.	Total.			Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.						M.	F.				M.	F.					
..	..	..	..	10	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	5	..	15
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	3	..	3
..	1	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	3	..	3
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	3	..	..	23	31	..	..	..	..	5	1	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	24	36	..	60
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	7	5	..	..	..	..	3	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	8	7	..	15
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	...
..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	...
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	3	4	..	7
..	..	..	..	7	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	8	..	15
..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	1	..	..	4	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	1	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	...
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	...
..	5	..	..	70	83	..	..	..	..	10	1	4	7	..	..	..	..	1	..	1	..	..	..	..	..	..	74	91	..	165

TABLE No. XV.

TOWNS IN MERRIMACK COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																					
	ORDER 1.—Diathetic.												ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total. M.	Total. F.	Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total. M.	Total. F.	Male.	Female.	Total.
Allenstown															4				4		4	4
Andover															3			2	1	2	1	3
Boscawen							1					1			6			1	5	1	6	7
Bow							1					1									1	1
Bradford										1		1			2				2		3	3
Canterbury				1			1					2	1		2			3		3	2	5
Chichester																						
Concord				11	2	1	1		1		7	9	2		35	1	4	23	19	30	28	58
Danbury		1		1							1	1			1			1		2	1	3
Dunbarton									1		1									1		1
Epsom		1				1						2			3			1	2	1	4	5
Franklin			1	2								3			3			1	2	1	5	6
Henniker															9			4	5	4	5	9
Hill			1								1				2			2		3		3
Hooksett															2				2		2	2
Hopkinton		2								1	2	1	1		7			4	4	6	5	11
Loudon															1			1		1		1
Newbury															1				1		1	1
New London			1									1									1	1
Northfield		1		1		1					3				2			1	1	4	1	5
Pembroke				3						1	1	3			2		1	1	2	2	5	7
Pittsfield				2								2		1	7		1	3	6	3	8	11
Salisbury		1										1			1			1		1	1	2
Sutton				1								1			3			2	1	2	2	4
Warner															2		1		3		3	3
Webster		1										1			1				1		2	2
Wilmot		1										1			1				1		2	2
Total	..	8	3	22	2	3	4	..	2	3	16	31	4	1	100	1	7	51	62	67	93	160

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.											Order 2.—Circulatory System.					Order 3.—Respiratory System.											
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain diseases.	Total.			Pericarditis.	Aneurism.	Heart Disease.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.					M.	F.									M.	F.
2			1						1	1	3														1		1
			1			1					2			1		1							4			2	2
1		1		1					1	4				1		1				2		1	11			7	7
														3		3							1			1	
			1							1				1		1							4			2	2
		1	1						1	1	2			1		1				1			4			1	4
		1	1								2			2		2							3			1	2
7		20	11	11		2		4	18	35	38		1	29	21	9				6	1		44	3	2	30	26
		1								1													2				2
														2	1	1							2			1	1
		1								1				2	2								2				2
2		2							1	1	3		3	3	2	3				7			9	1	1	7	11
									2	2				1		1							3			2	1
						1		1			2			2	1	1							2			2	
2		1	2					1		2	4			3	1	2							4			1	3
		2	4							4	2			2	2								12			4	8
			1								1			1	1												
		2								1	1			3	1	2											
		1									1			1		1											
							1	1	2	3	1												1				1
4		3	1						1	6	3			2		2							6			3	3
		1	1							2				5	2	3				1	1		6			3	5
									1	1				1	1								2			1	1
		1								1				1		1							3		1	2	2
		2	1						1	2	2												4			1	3
			1	1						1	1			2	2						1		3			2	2
			1							1				1		1					1		5			3	3
18		40	28	13		4	1	8	29	73	68		3	70	41	32			17	4	1	137	4	5	76	92

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN MERRIMACK COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total.	
																		M.	F.
Allenstown	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Andover	..	....	2	....	..	..	..	..	..	..	2	..	....	....	1	..	....	3	2
Boscawen	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	..
Bow	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Bradford	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Canterbury	2	1	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	3
Chichester	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Concord	1	5	5	....	..	..	..	..	..	..	3	..	....	1	3	..	2	12	8
Danbury	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Dunbarton	..	....	1	....	..	..	1	..	..	..	..	..	....	....	....	..	1	2	1
Epsom	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Franklin	3	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	3
Henniker	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hill	..	....	....	....	..	..	..	..	..	..	..	..	1	....	....	..	....	1	....
Hooksett	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hopkinton	1	....	....	....	..	1	1	..	..	..	..	..	....	....	1	..	1	3	2
Loudon	..	2	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	1
Newbury	..	....	....	....	..	1	..	..	..	..	..	..	....	....	....	..	....	....	1
New London	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Northfield	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Pembroke	..	2	....	....	..	..	..	..	..	..	..	..	....	....	1	..	1	1	3
Pittsfield	..	2	....	....	..	1	..	..	..	..	..	..	....	....	1	..	....	1	3
Salisbury	..	....	....	....	..	..	1	..	..	..	..	..	....	....	....	..	1	....	2
Sutton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Warner	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Webster	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Wilmot	..	....	....	....	..	..	..	..	..	..	..	..	....	....	1	..	1	2	....
Total	7	13	10	....	..	3	3	..	..	..	7	..	1	1	8	..	7	29	31

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.)	Cystitis.	Prostate, Disease of.	Kidney Disease.	Bladder, Disease of.	Testicles, Disease of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.	Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.							M.	F.			M.	F.				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5
1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	..	13
..	..	..	..	..	1	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	1	1	..	..	15	8	..	23
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	10	..	14
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
5	..	6	1	..	..	..	..	..	..	4	8	..	..	..	..	..	..	..	1	..	..	..	1	102	90	..	192
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
2	..	..	..	..	1	..	1	..	..	2	2	..	..	..	..	1	..	1	..	..	..	..	..	16	22	..	38
..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	9	..	13
1	..	..	..	..	..	..	2	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	15	13	..	28
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	1	..	..	..	..	..	10	13	..	23
..	..	3	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	9	13	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	3	..	1	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	3	9	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	..	10
9	..	18	2	1	2	..	6	..	..	15	23	..	..	..	1	1	..	1	1	1	..	1	1	236	248	..	484

TABLE No. XV.

TOWNS IN MERRIMACK COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																				
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.			
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Allenstown	..	1	..	..	..	..	..	..	....	1	1	..	1	....	....	....	1	....	3	3
Andover	1	..	..	..	..	..	..	..	....	1	..	..	....	....	....	....	....	....	1	1
Boscawen	..	..	..	..	..	..	..	1	1	....	..	..	....	2	1	....	....	3	1	4
Bow	..	1	..	..	..	..	..	..	1	....	1	..	1	4	1	....	....	5	2	7
Bradford	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Canterbury	1	..	..	..	..	..	..	..	1	....	..	..	....	1	1	....	....	2	1	3
Chichester	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Concord	19	2	8	3	..	1	..	7	27	13	1	1	2	9	9	4	4	40	28	68
Danbury	..	..	1	..	..	..	..	..	1	....	..	..	....	2	1	....	....	3	1	4
Dunbarton	..	..	..	..	..	..	..	..	....	....	..	..	....	2	2	....	....	2	2	4
Epsom	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	2	....	2	....	2
Franklin	5	..	..	..	..	..	..	..	4	1	..	..	....	....	2	....	....	4	3	7
Henniker	1	..	1	..	..	..	..	..	2	....	..	..	....	1	2	....	....	3	2	5
Hill	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Hooksett	3	1	1	..	..	..	..	..	3	2	..	..	....	....	1	....	....	3	3	6
Hopkinton	..	..	..	2	..	..	..	..	1	1	..	..	....	2	2	....	....	3	3	6
Loudon	..	..	..	..	..	..	..	..	....	....	..	..	....	....	2	1	....	1	2	3
Newbury	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
New London	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Northfield	..	..	..	..	..	..	..	1	1	....	..	..	....	....	2	....	....	1	2	3
Pembroke	..	..	1	..	..	..	..	1	....	2	..	..	....	2	4	....	....	2	6	8
Pittsfield	..	1	..	..	..	..	..	..	....	1	..	..	....	....	3	....	....	....	4	4
Salisbury	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Sutton	..	..	..	..	..	..	..	..	....	....	..	..	....	1	2	....	....	1	2	3
Warner	..	..	..	..	..	..	..	..	....	....	..	..	....	3	3	....	1	3	4	7
Webster	..	..	..	..	..	..	..	1	....	1	..	..	....	....	1	....	....	....	2	2
Wilmot	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Total	30	6	12	5	..	1	..	11	42	23	3	1	4	29	43	7	6	78	76	154

—*Continued.*

CLASS V.—VIOLENT DEATHS.																																	Grand Total for all Classes.
Order 1.—Accident and Negligence.										Order 2.		Order 3.—Suicide.										Order 4.—Various.				Total for Class V.							
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.			Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.			
						M.	F.			M.	F.							M.	F.			M.	F.	M.	F.									
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	16	..	27
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	9	12	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22	17	..	39
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	2	2	2	4	8	11	..	19
..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	2	5	11	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	11	14	..	25
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	5	..	10
6	..	2	1	3	2	14	23	5	..	..	..	..	..	..	..	..	1	1	2	..	..	..	..	6	1	31	6	37	227	188	..	415
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	7	6	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	6	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	7	8	..	15
1	..	2	..	1	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	6	5	6	11	34	43	..	77
..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	3	15	12	..	27
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	3	9	5	..	14
..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	4	4	8	14	20	..	34
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	25	25	..	50
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	4	6	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	4	6	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	1	3	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	11	..	23
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	3	11	3	14	31	35	*1	67
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	4	2	6	2	8	17	30	*2	49
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	6	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	10	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	12	17	..	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	7	..	12
..	..	1	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	8	7	..	15
8	..	5	2	6	2	19	36	6	..	..	..	..	..	..	..	..	1	6	7	..	..	..	..	29	23	72	29	101	524	537	3	1,064

* Classed with males.

TABLE No. XV.

CLASS I.—

ORDER 1.—Miasmatic.

TOWNS IN HILLSBOROUGH COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Amherst	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Antrim	..	..	..	1	..	..	3	..	1	..	..	..	..	1	..	..	..	..	3	..	..	..	..
Bedford	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Bennington	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..
Brookline	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deering	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
Francestown	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Goffstown	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Greenfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greenville	..	..	..	3	..	..	..	..	..	..	..	1	..	..	2	..	..	..	2	..	..	..	1
Hancock	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hillsborough	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Hollis	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hudson	..	..	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..
Litchfield	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lyndeborough	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Manchester	..	..	..	102	8	4	7	5	2	3	..	3	..	1	5	..	..	..	10	18	..	9	..
Mason	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Merrimack	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Milford	..	..	..	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	6	..	..	..	..
Mont Vernon	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Nashua	..	..	..	36	..	..	3	3	7	1	..	..	..	..	7	..	..	..	18	..	..	2	6
New Boston	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	..
New Ipswich	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	1	..
Pelham	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..
Peterborough	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..
Sharon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Temple	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Weare	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Wilton	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Windsor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
Total	..	..	..	155	8	5	14	11	11	9	..	4	..	2	17	..	..	..	65	19	..	13	7

—Continued.

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2—Enthetic. Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3.—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	6	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	3	..	9
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	3	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	6	..	9
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	1	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
2	2	..	..	86	95	..	..	..	..	8	3	7	4	..	1	..	1	1	1	..	..	..	..	..	94	100	..	194
3	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	7	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	..	10
..	..	..	..	....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	1	37	47	..	..	..	..	3	1	2	2	2	..	..	..	2	..	..	..	..	..	..	41	49	..	90
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	1	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	..	6
..	..	..	..	....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	2	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	2	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	....	..	2
5	2	..	1	168	180	..	..	..	..	12	4	10	6	2	1	..	1	3	1	..	..	..	..	..	181	187	..	368

TABLE No. XV.

TOWNS IN HILLSBOROUGH COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																								
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.								Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.							M.	F.					
Amherst	..	..	..	..	..	..	..	..	1	..	..	1		..	..	1	..	..	1	..	1	1	2			
Antrim	..	..	..	1	..	..	..	..	..	..	..	1		..	..	1	..	..	..	1	..	2	2			
Bedford	..	..	..	3	..	..	..	..	1	..	2	2		..	..	2	..	..	1	1	3	3	6			
Bennington	..	..	..	..	..	..	..	..	..	..	..	..		..	..	2	1	..	..	3	..	3	3			
Brookline	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..			
Deering	..	1	..	..	..	..	..	..	..	..	1	..		..	..	1	..	..	1	..	2	..	2			
Francestown	..	..	1	1	..	1	..	..	..	..	..	3		..	..	..	..	..	..	..	..	3	3			
Goffstown	..	..	1	3	..	..	..	..	..	..	2	2		..	..	2	..	..	1	1	3	3	6			
Greenfield	..	..	..	..	..	..	1	..	..	..	..	1		..	..	2	..	..	..	2	..	3	3			
Greenville	..	..	..	..	..	..	..	..	..	..	..	..		..	..	2	..	..	1	1	1	1	2			
Hancock	..	..	..	..	..	..	..	..	..	..	..	..		..	..	3	1	..	2	2	2	2	4			
Hillsborough	..	1	..	2	..	..	..	..	..	..	1	2		1	..	5	..	..	3	3	4	5	9			
Hollis	..	..	..	..	..	1	..	..	..	..	1	..		..	..	1	..	..	..	1	1	1	2			
Hudson	..	..	1	..	..	..	..	..	..	..	1	..		..	..	..	..	..	..	..	1	..	1			
Litchfield	..	..	..	..	..	..	..	..	..	..	..	..		..	..	1	..	..	..	1	..	1	1			
Lyndeborough	..	..	..	2	..	..	..	..	..	..	..	2		..	..	1	..	..	..	1	..	3	3			
Manchester	..	3	3	10	3	7	4	..	..	1	8	23		1	..	91	5	3	48	52	56	75	131			
Mason	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..			
Merrimack	..	..	..	1	..	..	..	..	1	..	..	2		..	..	4	..	..	3	1	3	3	6			
Milford	..	..	..	2	..	..	..	..	..	1	1	2		..	..	5	..	..	4	1	5	3	8			
Mont Vernon	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..			
Nashua	..	1	1	4	..	6	..	..	2	2	6	10		..	..	26	2	3	13	18	19	28	47			
New Boston	..	..	..	2	..	..	..	..	..	..	..	2		..	..	..	..	..	..	..	..	2	2			
New Ipswich	..	..	..	..	..	..	1	..	..	..	..	1		..	..	1	..	..	1	..	1	1	2			
Pelham	..	..	..	1	..	..	..	..	..	..	..	1		..	1	1	..	..	1	1	1	2	3			
Peterborough	..	..	..	1	..	..	1	..	..	1	2	1		..	..	4	..	..	3	1	5	2	7			
Sharon	..	..	..	..	..	..	..	..	..	..	..	..		..	..	1	..	..	..	1	..	1	1			
Temple	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..			
Weare	..	1	..	2	..	..	..	..	..	..	..	3		..	1	3	..	..	1	3	1	6	7			
Wilton	..	..	..	4	..	..	..	..	..	..	..	4		..	..	15	..	..	5	10	5	14	19			
Windsor	..	..	..	..	..	..	..	..	..	..	..	..		..	..	..	..	..	..	..	..	..	..			
Total	..	7	7	39	3	15	7	..	5	5	25	63		2	2	175	9	6	89	105	114	168	282			

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.													Order 2.—Circulatory System.					Order 3.—Respiratory System.											
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.			Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.		
										M.	F.				M.	F.									M.	F.		
..	..	3	..	1	..	..	..	..	..	3	1		..	..	1	....	1	..	..	2	..	....	3	1	..	5	1		
..	..	..	3	..	..	..	..	..	1	2	2		..	..	4	3	1	..	..	1	..	....	4	..	..	1	4		
..	..	..	1	..	..	..	..	..	..	1	....		..	..	2	....	2	..	..	2	..	....	1	..	1	4	....		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	1	....	1	..	..	..	..	....	1	..	..	1	....		
..	..	3	..	..	..	..	..	..	..	2	1		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	..	1	..	..	..	..	..	1	2	....		..	..	3	2	1	..	..	..	..	....	2	..	..	1	1		
..	..	..	3	..	..	..	..	..	..	2	1		..	..	1	1	....	..	..	..	..	....	2	..	..	1	1		
..	..	2	2	..	..	..	..	..	2	3	3		..	1	4	3	2	..	..	..	..	1	1	..	..	1	1		
..	..	..	1	..	..	..	..	..	..	1	....		..	..	1	1	....	..	..	..	..	....	....	..	..	....	....		
..	..	2	..	..	..	..	..	1	..	1	2		..	..	2	....	2	..	..	..	2	....	3	..	..	2	3		
..	..	2	..	..	..	..	..	..	..	1	1		..	..	1	1	....	..	..	..	..	....	....	..	..	....	....		
1	..	..	2	..	..	..	..	1	2	4	2		..	..	5	2	3	..	..	..	..	....	9	1	..	4	6		
1	..	..	..	..	..	..	..	..	..	1	....		..	..	6	3	3	..	..	1	..	....	2	..	..	1	2		
..	..	1	..	..	..	..	..	..	1	1	1		..	..	3	1	2	..	..	4	..	....	4	..	..	3	5		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	1	..	....	....	..	..	....	1		
..	..	1	1	..	..	..	..	..	..	1	1		..	..	2	1	1	..	..	..	..	....	1	..	..	1	....		
22	3	21	18	..	..	2	..	13	14	46	47		2	..	56	33	25	..	1	30	8	2	50	1	1	51	42		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	..	1	..	..	..	..	..	..	....	1		..	..	3	....	3	..	..	2	..	....	3	..	..	3	2		
..	..	7	4	2	..	..	..	..	1	5	9		..	..	2	1	1	..	..	6	1	....	6	..	..	5	8		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
8	1	14	7	..	..	..	..	5	6	22	19		..	..	22	11	11	..	1	18	4	2	55	..	1	43	38		
..	..	3	1	..	..	..	..	1	..	3	2		..	..	1	....	1	..	..	2	1	....	2	..	..	4	1		
..	1	1	2	..	..	..	..	..	..	1	3		..	..	1	....	1	..	..	1	..	....	5	..	..	2	4		
1	..	2	1	..	..	..	..	..	..	2	2		..	..	4	1	3	..	..	..	..	....	10	..	..	3	7		
2	..	7	..	..	..	..	..	..	..	4	5		..	..	3	2	1	..	..	3	..	....	5	..	..	4	4		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	1	..	..	..	..	..	..	..	1	....		..	..	1	1	....	..	..	..	..	....	....	..	..	....	....		
..	1	1	3	..	..	..	..	..	..	2	3		..	..	1	1	....	..	..	1	..	1	1	..	..	1	2		
3	1	8	..	..	..	..	..	2	7	13	8		..	..	4	3	1	..	..	6	1	....	5	..	..	9	3		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
38	7	79	51	3	..	2	..	23	35	124	114		2	1	134	71	66	..	2	80	17	6	175	3	3	150	136		

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN HILLSBOROUGH COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Disease.	Spleen Disease.	Bowel Disease.	Total.	
																		M.	F.
Amherst	..	....	....	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	....
Antrim	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Bedford	1	....	....	....	..	..	..	..	..	..	..	..	..	....	....	..	....	1	....
Bennington	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	....	1
Brookline	..	....	1	....	..	1	..	..	..	..	..	..	....	....	1	..	....	2	1
Deering	..	....	....	....	..	..	1	..	..	..	..	..	....	....	....	..	....	1	....
Francestown	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Goffstown	..	....	....	....	..	..	..	..	..	..	2	..	....	....	....	..	....	1	1
Greenfield	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	....	1
Greenville	..	....	1	....	..	..	..	..	..	..	1	..	....	....	1	..	1	3	1
Hancock	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hillsborough	..	....	....	....	..	..	..	..	..	..	..	..	....	..	1	..	....	1	....
Hollis	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	....
Hudson	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Litchfield	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Lyndeborough	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Manchester	7	7	12	....	3	1	1	..	..	..	1	..	1	2	11	..	2	13	35
Mason	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Merrimack	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Milford	..	1	2	....	1	..	..	..	..	..	..	..	....	....	....	..	....	1	3
Mont Vernon	..	....	....	....	..	..	..	..	..	..	2	..	....	....	....	..	....	1	1
Nashua	4	3	1	....	..	1	2	..	..	..	..	..	3	....	....	..	1	6	9
New Boston	..	....	....	....	..	..	..	..	..	..	..	..	....	1	....	..	....	....	1
New Ipswich	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Pelham	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Peterborough	..	....	....	....	..	..	1	..	..	..	1	..	....	....	....	..	....	2	....
Sharon	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Temple	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Weare	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Wilton	..	1	2	....	..	..	..	..	..	..	..	..	....	....	....	..	....	2	1
Windsor	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Total	12	12	21	....	4	3	5	..	..	..	8	..	4	3	15	..	6	38	55

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.													Order 6.—Generative. Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.				Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total.			Ovarian Dropsy.	Disease of Uterus.	Total.	Bone, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.			Phlegmon.	Ulcer.	Skin Diseases.	Total.			Male.	Female.	Sex not stated.	Total.
										M.	F.								M.	F.					M.	F.					
..	..	1	..	..	1	..	..	..	..	2	...		...	...	...	..	..	..	...	...		..	..	...	...	...		11	3	..	14
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		6	7	..	13
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		6	2	..	8
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		1	2	..	3
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		4	2	..	6
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		6	2	..	8
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		4	2	..	6
..	..	1	..	..	..	..	..	..	..	1	...		...	...	...	..	..	..	...	...		..	..	...	...	...		9	7	..	16
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		2	1	..	3
..	..	..	1	..	..	..	..	..	..	1	...		...	...	...	..	..	..	...	...		..	..	...	...	...		7	8	..	15
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		2	1	..	3
..	..	1	..	..	..	..	1	..	..	2	...		...	...	...	1	..	1	...	...		..	..	...	...	...		14	11	..	25
1	..	..	..	..	..	..	..	..	..	1	...		...	...	...	..	..	..	...	...		..	..	...	...	...		7	5	..	12
..	..	..	..	..	1	..	..	..	..	1	...		...	...	...	..	..	..	...	...		..	..	...	...	...		6	8	..	14
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		...	1	..	1
1	..	..	1	..	..	..	..	..	..	...	2		...	...	...	..	..	..	...	...		..	..	...	...	...		3	4	..	7
11	..	13	5	..	1	..	..	4	..	16	18		...	...	...	..	..	..	...	...		1	..	...	...	1		159	168	..	327
..	..	..	..	..	1	..	..	..	..	1	...		...	...	...	..	..	..	...	...		..	..	...	...	...		2	...	..	2
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		3	6	..	9
..	..	1	..	..	..	..	2	..	..	1	2		...	...	...	..	..	..	...	...		..	..	...	...	...		13	23	..	36
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		1	1	..	2
2	..	7	3	..	2	..	..	..	..	8	6		...	...	...	1	..	1	...	...		..	..	...	...	...		91	83	..	174
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		7	5	..	12
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		3	8	..	11
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		7	12	..	19
..	..	1	1	..	..	..	..	..	..	2	...		...	...	...	..	..	..	...	...		..	..	...	...	...		14	10	..	24
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		...	...	..	...
1	..	..	1	..	..	..	..	..	..	1	1		...	...	...	..	..	..	...	...		..	..	...	...	...		3	1	..	4
..	..	2	..	..	..	..	..	..	..	1	1		...	...	...	..	..	..	...	...		..	..	...	...	...		5	6	..	11
..	..	1	..	..	..	..	4	..	..	22	3		...	...	...	..	..	..	...	...		..	..	...	...	...		29	16	..	45
..	..	..	..	..	..	..	..	..	..	...	...		...	...	...	..	..	..	...	...		..	..	...	...	...		...	...	..	...
16	..	28	12	..	6	..	7	4	..	40	33		...	...	...	2	..	..	2	...		1	..	..	...	1		425	405	..	830

TABLE No. XV.

CLASS IV.—DEVELOPMENTAL DISEASES.

TOWNS IN HILLSBORO' COUNTY.	Order 1.—Of Children.										Order 2.—Of Women.			Orders 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Amherst	1	..	..	..	..	..	..	..	1	....	..	..	....	....	....	....	....	1	....	1
Antrim	..	..	1	..	..	..	..	..	1	....	..	..	....	....	1	....	....	1	1	2
Bedford	2	..	..	..	..	..	..	1	2	1	..	..	....	1	....	....	1	3	2	5
Bennington	..	..	..	..	..	..	..	1	....	1	..	..	....	....	....	....	1	....	2	2
Brookline	..	..	..	..	..	..	..	1	....	1	..	..	....	....	....	....	....	....	1	1
Deering	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Francestown	..	..	1	..	..	..	..	..	1	....	..	..	....	....	1	1	....	2	1	3
Goffstown	..	..	..	..	..	..	..	1	1	....	..	..	....	5	....	1	....	7	....	7
Greenfield	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Greenville	3	..	..	..	..	2	..	..	4	1	..	..	....	....	....	....	3	4	4	8
Hancock	1	..	..	..	..	..	..	..	1	....	..	..	....	....	....	....	....	1	....	1
Hillsborough	..	..	1	..	..	..	..	..	1	....	1	1	2	1	1	....	....	2	3	5
Hollis	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Hudson	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Litchfield	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Lyndeborough	1	..	1	..	..	..	..	..	2	....	1	..	1	....	....	....	....	2	1	3
Manchester	58	20	12	..	..	4	7	14	62	53	2	1	3	6	14	6	9	74	79	153
Mason	..	..	..	..	..	..	..	..	....	....	..	..	....	1	3	....	....	1	3	4
Merrimack	..	..	..	..	..	..	..	2	2	....	..	..	....	1	2	....	....	3	2	5
Milford	3	..	..	..	..	..	..	..	2	1	..	..	....	....	1	....	....	2	2	4
Mont Vernon	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Nashua	18	19	9	..	1	..	1	5	30	23	..	..	....	3	7	1	1	34	31	65
New Boston	..	..	..	..	1	..	..	..	1	....	..	..	....	1	....	....	....	2	....	2
New Ipswich	..	..	..	..	..	..	..	1	1	....	..	..	....	....	2	....	....	1	2	3
Pelham	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Peterborough	2	..	..	1	..	..	..	2	3	2	..	..	....	2	....	....	1	5	3	8
Sharon	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Temple	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Weare	..	1	..	..	..	..	..	..	1	....	..	..	....	2	3	....	....	3	3	6
Wilton	1	..	..	..	..	..	..	..	....	1	..	..	....	1	....	....	....	1	1	2
Windsor	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Total	90	40	25	1	2	6	8	28	116	84	4	2	6	26	40	9	16	151	146	297

—*Continued.*

CLASS V.—VIOLENT DEATHS.																																	Grand Total for all Classes.			
Order 1.—Accident and Negligence.									Order 2.		Order 3.—Suicide.										Order 4.—Various.				Total for Class V.											
Fracture and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.		Cause not Reported or Unclassified.		Male.		Female.		Total.								
						M.	F.		M.	F.							M.	F.	M.	F.	M.	F.	M.	F.													
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1							15	4	..	19
..	..	..	1	..	..	2	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3							15	14	..	29
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	3	1	4	1	5							17	8	..	25
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							3	9	..	12
..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3							5	5	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	1							9	4	..	13
..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1							7	6	..	13
..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3							22	13	..	35
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1							3	6	..	9
..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	3	3	6							18	22	..	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1							6	4	..	10
..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	1	1	2							23	22	..	45
..	..	1	..	1	..	..	1	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	2	1	3							12	8	..	20
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2							12	11	..	23
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1							1	3	..	4
1	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2							8	9	..	17
4	..	2	..	3	2	9	15	5	..	..	..	1	..	..	2	..	..	1	2	..	..	..	114	96	130	103	233							501	525	12*	1,038
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1							6	5	..	11
1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	1	1	2							10	12	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	2	2							27	33	..	60
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							1	3	..	4
..	..	..	2	..	2	2	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	9	14	12	26							199	203	..	402
..	..	..	..	2	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2							13	11	..	24
..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2							7	17	..	24
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							8	16	..	24
1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	..	2	1	3							29	17	..	46
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							.....	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1							4	2	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2							13	17	..	30
..	..	..	..	2	..	2	3	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	4	2	6							40	34	..	74
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							2	.....	..	2
8	1	4	4	9	4	18	30	18	..	..	..	3	..	1	2	..	5	8	3	..	..	..	139	117	177	138	315							1,036	1,044	12	2,092

* Classed with males.

TABLE No. XV.

CLASS I.

ORDER 1.—Miasmatic.

TOWNS IN CHESHIRE COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Alstead	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	4	..	..	..	..
Chesterfield	..	..	..	....	..	....	....	1	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Dublin	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	2	..	..	..	..
Fitzwilliam	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	2	..	..	1	1
Gilsum	..	..	..	....	..	....	....	....	....	....	..	..	..	..	1	..	..	..	1	..	..	..	..
Harrisville	..	..	..	....	..	....	....	....	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..
Hinsdale	..	..	..	3	..	1	....	....	....	....	..	..	..	..	..	..	..	..	2	..	..	..	..
Jaffrey	..	..	..	1	..	....	....	....	....	....	..	..	..	..	..	..	..	..	2	..	..	..	..
Keene	..	..	..	4	..	....	9	....	1	1	..	..	..	..	2	..	..	..	6	..	..	..	2
Marlborough	..	..	..	2	..	1	2	....	....	....	..	..	..	..	..	..	..	..	2	..	..	..	..
Marlow	..	..	..	....	..	....	1	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Nelson	..	..	..	....	..	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Richmond	..	..	..	....	..	....	....	....	....	....	1	..	..	..	..	..	..	..	1	..	..	1	..
Rindge	..	..	..	1	..	....	1	....	....	....	..	..	..	..	1	..	..	..	1	..	..	..	..
Roxbury	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Stoddard	..	..	..	....	..	....	....	....	....	....	..	..	..	..	1	..	..	..	..	..	..	..	..
Sullivan	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	1	..	..	..	..
Surry	..	..	..	1	..	....	....	....	....	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Swanzey	..	..	..	....	..	....	2	....	1	....	..	..	..	..	1	..	..	..	1	..	..	..	..
Troy	..	..	..	2	..	....	....	....	1	....	..	..	..	..	..	..	..	..	..	..	..	..	..
Walpole	..	..	..	4	..	1	....	....	....	....	..	..	..	..	..	..	..	..	4	..	..	..	..
Westmorel'nd	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	..	..	..	3	..	..	..	..
Winchester	..	..	..	1	..	....	....	....	....	....	..	..	..	..	1	..	..	..	2	..	..	..	..
Total	..	..	..	19	..	3	15	1	4	*1	1	..	..	..	8	..	..	..	35	..	..	2	3

—*Continued.*

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2.—Enthetic. Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	1	3	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	12	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	13	..	25
..	..	..	..	4	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	2	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	4	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	3
..	3	..	..	4	3	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	5	..	..	49	48	..	..	..	..	4	..	2	2	..	..	..	..	..	..	..	..	..	..	..	51	50	..	101

TABLE No. XV.

TOWNS IN CHESHIRE COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																								
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.								Total for for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.			Male.	Female.	Total.
											M.	F.							M.	F.				
Alstead	..	..	..	..	..	..	..	..	..	..	....	....	..	..	2	..	..	2	....	2	....	2	....	2
Chesterfield	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	1	2	....	2	....	2	....	2
Dublin	..	..	1	..	..	..	..	..	..	..	1	....	..	..	..	..	..	....	....	1	....	1	....	1
Fitzwilliam	..	..	..	..	..	1	..	..	..	..	....	1	..	..	4	..	..	3	1	3	2	5		
Gilsum	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	..	....	1	....	1	1		
Harrisville	..	..	..	1	..	..	..	..	..	..	....	1	..	..	4	..	..	....	4	....	5	5		
Hinsdale	..	..	..	1	..	..	..	..	..	..	....	1	1	..	1	..	..	....	2	....	3	3		
Jaffrey	..	..	..	..	..	2	..	..	..	1	1	2	1	..	2	..	..	1	2	2	4	6		
Keene	..	2	..	3	..	..	..	..	1	1	1	6	..	..	19	..	..	10	9	11	15	26		
Marlborough	..	..	..	..	1	..	..	..	..	..	....	1	..	..	..	..	..	....	....	....	1	1		
Marlow	..	..	..	1	..	..	..	..	..	..	....	1	..	..	1	..	..	....	1	....	2	2		
Nelson	..	..	..	..	..	..	..	..	..	1	1	....	..	..	..	..	..	....	....	1	....	1		
Richmond	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	....	....	....	....	....		
Rindge	..	..	..	..	..	..	..	..	..	1	....	1	..	..	2	..	..	1	1	1	2	3		
Roxbury	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	....	....	....	....	....		
Stoddard	..	..	..	..	..	1	..	..	..	..	....	1	..	..	1	..	..	1	....	1	1	2		
Sullivan	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	..	....	1	....	1	1		
Surry	..	..	..	..	..	..	..	..	1	..	1	....	..	..	..	..	..	....	....	1	....	1		
Swanzey	..	..	..	..	..	..	..	..	..	..	....	....	..	..	3	..	..	1	2	1	2	3		
Troy	..	..	..	..	..	..	..	..	..	..	....	....	..	..	2	..	..	1	1	1	1	2		
Walpole	..	..	..	..	..	..	..	..	..	..	....	....	..	..	5	..	..	3	2	3	2	5		
Westmoreland	..	..	..	1	..	1	..	..	2	..	2	2	..	..	4	..	..	2	2	4	4	8		
Winchester	..	..	..	..	..	..	..	..	..	1	....	1	..	1	3	..	1	3	2	3	3	6		
Total	..	2	1	7	1	5	..	..	4	5	7	18	2	1	56	..	2	30	31	37	49	86		

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.													Order 2.—Circulatory System.					Order 3.—Respiratory System.											
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain diseases.	Total.			Pericarditis.	Aneurism.	Heart Disease.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.		
										M.	F.					M.	F.									M.	F.	
1	..	2	..	..	..	..	..	..	1	3	1	..	..	..	1	....	1	..	..	....	..	..	2	1	..	1	2	
..	..	1	1	..	..	..	..	..	..	....	2	..	..	..	3	3	....	..	..	....	..	..	1	..	..	....	1	
..	..	2	..	..	..	..	..	..	..	1	1	..	..	..	....	....	....	..	..	....	..	..	1	..	..	1	....	
..	..	..	1	..	..	..	..	..	..	....	1	..	..	..	2	1	1	..	..	1	..	..	4	1	..	2	4	
..	..	..	..	..	..	..	..	..	2	2	....	..	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	1	1	....	..	..	1	..	..	....	..	..	....	1	
3	..	4	1	..	..	..	..	..	..	4	4	..	..	..	7	5	2	..	..	....	..	..	5	..	..	1	4	
..	..	..	1	..	..	..	..	..	..	1	....	..	..	..	....	....	....	..	..	4	..	..	2	..	..	3	3	
1	..	3	5	1	..	..	..	..	3	8	5	..	..	..	12	6	6	..	..	....	..	..	18	..	..	11	7	
3	..	..	1	..	..	..	..	..	..	2	2	..	..	..	3	2	1	..	..	....	..	..	1	..	..	....	1	
2	..	..	..	..	..	..	..	1	..	1	2	..	..	..	....	....	....	..	..	1	..	..	3	..	..	2	2	
1	..	..	3	1	..	..	..	..	..	4	1	..	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....	
..	..	..	1	..	..	..	..	1	1	2	1	1	..	..	....	1	....	..	..	....	..	..	3	..	..	3	....	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	....	....	....	..	..	....	..	..	3	..	..	2	1	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	....	....	....	..	..	....	..	..	3	..	..	1	2	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	1	....	1	..	..	....	..	..	....	..	..	....	....	
..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1	
1	..	..	5	..	..	..	..	..	..	4	2	..	..	..	7	2	5	..	..	....	..	..	10	..	..	6	4	
1	..	2	4	..	..	..	..	2	..	5	4	..	..	..	....	....	....	..	..	2	..	..	4	..	..	2	4	
1	..	2	1	1	..	..	..	3	..	2	6	..	..	..	5	3	2	..	..	2	..	..	12	1	..	10	5	
..	..	..	..	..	..	..	..	..	1	1	....	..	..	..	3	1	2	..	..	....	..	..	3	..	1	3	1	
2	..	1	..	..	..	..	..	..	..	1	2	1	..	..	1	1	1	..	..	1	1	..	8	..	..	6	4	
16	..	17	24	3	..	..	..	7	8	41	34	2	..	..	46	26	22	..	..	12	1	..	86	3	1	54	49	

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN CHESHIRE COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Alstead	..	....	....	....	..	..	..	..	..	1	..	..	....	....	....	..	....	1	....
Chesterfield	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Dublin	..	....	....	....	..	..	..	..	..	..	..	..	1	....	....	..	....	1	....
Fitzwilliam	..	....	....	....	..	..	1	..	..	..	..	..	....	....	....	..	....	....	1
Gilsum	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Harrisville	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hinsdale	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Jaffrey	..	....	....	....	..	..	..	..	..	..	..	..	....	....	1	..	....	....	1
Keene	1	1	1	....	..	..	..	..	..	..	1	..	....	....	1	..	1	4	2
Marlborough	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	....	1
Marlow	..	....	....	....	..	..	..	1	..	..	..	..	....	....	....	..	....	....	1
Nelson	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Richmond	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Rindge	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Roxbury	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Stoddard	..	1	....	....	..	1	..	..	..	..	..	..	....	....	....	..	....	1	1
Sullivan	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Surry	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Swanzey	1	1	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	3
Troy	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Walpole	1	1	....	....	..	1	2	..	..	..	..	..	....	....	....	..	2	4	3
Westmoreland	..	2	....	....	..	..	..	..	..	..	..	..	....	....	2	..	....	1	3
Winchester	1	....	1	....	..	..	..	..	..	..	1	..	....	....	....	..	....	3	....
Total	5	8	4	....	..	2	3	1	..	1	2	..	1	....	4	..	4	17	18

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.											Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.					Order 8.—Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.)	Cystitis.	Prostate, Disease of.	Kidney Disease.	Bladder, Disease of.	Testicles, Disease of.	Total.				Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.	Ovarian Dropsy.	Disease of Uterus.	Total.				M.	F.				M.	F.				
..	..	1	..	..	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	4	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3	8	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	10	..	21
..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	1	..	..	..	1	31	21	..	52
..	..	1	..	..	..	..	..	1	..	2	..	..	..	..	1	..	1	..	..	..	..	..	..	7	5	..	12
..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	1	..	4	6	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	5	1	..	6
..	..	..	..	1	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	8	1	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	12	14	..	26
..	..	1	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	9	9	..	18
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	20	16	..	36
..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	6	7	..	13
..	..	..	..	..	..	..	1	..	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	12	8	..	20
..	..	7	1	..	1	..	4	1	..	10	4	2	1	3	1	..	1	..	2	..	1	2	1	151	131	..	282

TABLE No. XV.

TOWNS IN CHESHIRE COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																				
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.			
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Alstead	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	...	...	....	1	1
Chesterfield	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	...	...	....	....	....
Dublin	..	..	1	..	..	..	..	..	1	....	..	..	....	1	1	...	...	2	1	3
Fitzwilliam	..	..	..	..	..	..	..	..	....	....	..	..	....	....	3	...	...	....	3	3
Gilsum	1	..	..	..	..	..	..	..	1	....	..	..	....	....	....	...	...	1	....	1
Harrisville	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	...	...	1	....	1
Hinsdale	..	..	..	..	..	..	..	..	....	....	2	..	2	2	1	...	...	2	3	5
Jaffrey	1	2	1	..	..	..	..	..	2	2	..	..	....	....	2	...	...	2	4	6
Keene	3	3	..	1	..	1	..	..	8	....	..	..	....	3	4	...	...	11	4	15
Marlborough	1	1	..	..	..	1	..	3	3	3	1	..	1	1	2	...	...	4	6	10
Marlow	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	...	...	1	....	1
Nelson	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	...	...	....	....	....
Richmond	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	...	...	....	1	1
Rindge	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	...	...	....	....	....
Roxbury	1	..	..	..	..	..	..	..	....	1	..	..	....	....	....	...	...	....	1	1
Stoddard	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	...	...	1	....	1
Sullivan	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	...	...	....	1	1
Surry	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	...	...	....	....	....
Swanzey	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	...	...	....	1	1
Troy	..	..	..	..	..	..	..	2	1	1	..	..	....	....	2	...	...	1	3	4
Walpole	..	2	..	..	..	..	..	..	1	1	..	..	....	3	1	...	1	4	3	7
Westmoreland	..	..	..	..	..	..	..	..	....	....	..	..	....	1	3	...	...	1	3	4
Winchester	..	..	..	..	..	..	..	1	....	1	..	..	....	....	4	...	...	....	5	5
Total	7	8	2	1	..	2	..	6	17	9	3	..	3	14	27	...	1	31	40	71

—*Continued.*

CLASS V.—VIOLENT DEATHS.																														Grand Total for all Classes.			
Order 1.—Accident and Negligence.									Order 2.		Order 3.—Suicide.									Order 4.—Various.				Total for Class V.								
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.		Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.							
							M.	F.	M.	F.								M.	F.			M.	F.										
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	7	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	1	1	2	3	7	7	..	14
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	3	..	10
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	..	2	10	16	..	26
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	8	..	10	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	4	1	4	5	17	22	..	39	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	9	17	..	26	
..	..	..	1	..	4	5	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	10	4	15	5	20	80	58	..	138	
1	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	3	17	16	..	33	
1	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	9	8	..	17	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	
..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3	..	3	9	5	..	14	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	2	2	4	13	7	..	20	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	1	1	1	1	2	3	3	..	6	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	5	..	11	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4	
..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	3	3	..	6	
1	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	1	3	1	4	19	20	..	39	
..	..	..	..	..	2	1	1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	1	..	1	3	4	14	17	..	31	
..	..	..	1	..	3	4	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	..	7	..	7	38	26	..	64	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	2	11	19	..	30	
..	..	1	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	3	21	21	..	42	
3	..	1	..	3	..	14	18	3	..	..	..	..	..	2	..	3	2	4	3	..	..	21	19	43	25	68	313	295	..	608	

TABLE No. XV.

CLASS I.

ORDER 1.—Miasmatic.

TOWNS IN SULLIVAN COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Acworth	..	..	..	....	..	....	....	....	....	....	..	..	....	..	..	....	..	..	..	....	..	..	..
Charlestown	..	..	..	....	..	....	....	....	....	....	..	1	....	..	..	....	..	..	2	....	..	..	..
Claremont	..	..	..	10	2	....	....	1	....	1	..	..	....	..	2	....	..	..	4	....	..	1	..
Cornish	..	..	..	....	..	....	....	....	....	....	..	..	....	..	1	....	..	..	3	....	..	..	1
Croydon	..	..	..	....	..	....	....	....	1	....	..	..	....	..	..	....	..	..	..	....	..	..	..
Goshen	..	..	..	....	..	....	....	1	....	....	..	1	..	..	..	....	..	..	..	....	..	..	..
Grantham	..	..	..	....	..	....	....	....	....	....	..	..	..	..	..	....	..	..	1	....	..	..	..
Langdon	..	..	..	....	..	....	....	....	....	....	..	..	....	..	..	....	..	..	..	....	..	..	..
Lempster	..	..	..	1	..	....	....	....	....	....	..	..	....	..	..	....	..	..	..	....	..	..	..
Newport	..	..	..	3	..	....	....	2	1	....	..	1	....	..	5	....	..	..	5	....	..	..	..
Plainfield	..	..	..	....	..	....	....	....	....	....	..	..	....	..	..	....	..	..	2	....	..	..	..
Springfield	..	..	..	....	..	....	....	....	1	....	..	..	....	..	..	....	..	..	2	....	..	..	..
Sunapee	..	..	..	....	..	....	....	....	....	....	..	..	....	..	..	....	..	..	1	....	..	..	..
Unity	..	..	..	....	1	....	....	....	....	....	..	..	....	..	1	....	..	..	1	....	..	..	..
Washington	..	..	..	....	1	....	....	....	....	....	..	..	....	..	..	....	..	..	4	....	..	..	..
Total	..	..	..	14	4	....	....	4	3	1	..	3	....	..	9	....	..	..	25	....	..	1	1

—*Continued.*

ZYMOTIC DISEASES.

						Order 2.—Enthetic.								Order 3—Dietic.						Order 4.—Parasitic.					Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	...	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	....	....	..	...
..	..	..	..	3	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	3	....	..	3
..	..	..	..	12	9	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	12	9	..	21
..	..	..	..	2	3	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	2	3	..	5
..	..	..	..	1	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	1	....	..	1
..	..	..	..	...	2	..	..	..	..	1	..	1	...	..	..	..	..	...	...	..	..	..	...	...	1	2	..	3
..	..	..	..	...	1	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	....	1	..	1
..	..	..	..	...	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	....	....	..	...
..	..	..	..	1	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	1	....	..	1
..	..	..	..	7	10	..	..	..	..	..	..	...	...	..	1	..	..	1	...	..	..	..	...	...	8	10	..	18
..	..	..	..	2	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	2	....	..	2
..	..	..	..	2	1	..	..	..	..	1	..	...	1	..	..	..	..	...	...	..	..	..	...	...	2	2	..	4
..	..	..	..	1	...	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	1	....	..	1
..	..	..	..	2	1	..	..	..	..	1	..	...	1	..	..	..	..	...	...	..	..	..	...	...	2	2	..	4
..	..	..	..	3	2	..	..	..	..	..	..	...	...	..	..	..	..	...	...	..	..	..	...	...	3	2	..	5
..	..	..	..	36	29	..	..	..	..	3	..	1	2	..	1	..	..	1	...	..	..	..	...	...	38	31	..	69

TABLE No. XV.

TOWNS IN SULLIVAN COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																								
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.								Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.		
											M.	F.							M.	F.					
Acworth	..	..	..	1	..	..	..	..	..	..	...	1		1	..	...	..	..	...	1	...	2	2		
Charlestown	..	..	..	1	..	..	..	..	1	..	1	1		..	..	2	..	..	...	2	1	3	4		
Claremont	..	..	..	2	1	..	..	..	..	..	2	1		..	1	12	..	1	4	10	6	11	17		
Cornish	..	..	..	..	..	..	..	..	..	..	...	...		..	..	1	..	..	1	...	1	...	1		
Croydon	..	..	..	1	..	..	..	..	..	..	...	1		..	..	...	..	..	...	...	...	1	1		
Goshen	..	..	..	..	..	..	..	..	..	..	...	...		..	..	1	..	..	1	...	1	...	1		
Grantham	..	..	..	..	..	..	..	..	..	..	...	...		..	..	1	..	..	1	...	1	...	1		
Langdon	..	..	..	..	..	..	..	..	..	..	...	...		..	..	1	..	..	1	...	1	...	1		
Lempster	..	..	..	..	1	..	..	..	..	..	...	1		..	..	1	..	..	...	1	...	2	2		
Newport	..	..	1	3	..	..	1	..	..	..	2	3		..	..	5	..	..	1	4	3	7	10		
Plainfield	..	..	..	..	1	..	..	..	..	..	...	1		..	..	1	..	..	...	1	...	2	2		
Springfield	..	..	..	..	..	..	..	..	..	..	...	...		..	..	...	..	..	...	...	...	...	...		
Sunapee	..	..	..	..	..	..	1	..	..	..	...	1		..	..	...	..	..	...	...	...	1	1		
Unity	..	..	..	..	..	1	..	..	..	1	1	1		..	..	1	..	..	1	...	2	1	3		
Washington	..	..	..	..	..	..	..	..	..	1	1	...		..	..	1	..	..	...	1	1	1	2		
Total	..	..	1	8	3	1	2	..	1	2	7	11		1	1	27	..	1	10	20	17	31	48		

—*Continued.*

CLASS III.—LOCAL DISEASES.

ORDER 1.—Nervous System.													ORDER 2.—Circulatory System.					ORDER 3.—Respiratory System.											
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.			Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.		
										M.	F.					M.	F.									M.	F.	
..	..	1	2	..	..	..	..	..	1	..	3	1	..	..	4	4	....	..	..	..	..	....	3	..	..	1	2	
1	..	4	..	..	..	..	..	..	2	2	5	..	..	1	1	....	..	..	..	..	....	6	..	..	....	6		
3	..	6	1	1	..	..	..	1	2	9	5	..	..	6	3	3	..	..	3	..	....	13	..	..	6	10		
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	1	..	....	10	..	..	5	6		
..	..	1	..	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	..	..	....	2	..	..	1	1		
..	..	..	1	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	..	..	1	1	..	..	....	2		
..	..	2	..	..	..	..	..	..	..	2	....	..	..	2	1	1	..	..	..	..	....	4	..	..	1	3		
..	..	..	..	..	..	..	..	..	1	1	....	..	..	2	1	1	..	..	..	..	....	2	..	..	....	2		
..	..	..	..	..	..	..	..	..	1	1	....	..	..	1	1	....	..	..	..	..	....	2	..	..	2	....		
..	..	6	..	..	..	..	..	1	5	6	6	..	..	12	3	9	..	..	3	..	....	5	..	1	6	3		
1	..	..	1	..	..	..	..	..	..	1	1	..	..	2	1	1	..	..	..	..	....	4	..	..	2	2		
..	..	1	..	..	..	..	..	..	..	1	....	..	..	3	2	1	..	..	..	..	....	3	2	..	3	2		
..	..	1	..	..	..	..	..	..	..	....	1	1	..	1	....	2	..	..	..	..	....	5	..	..	4	1		
..	..	2	..	..	..	..	..	..	..	1	1	..	..	2	1	1	..	..	1	..	....	2	..	..	1	2		
1	..	1	..	..	..	..	..	..	1	1	2	..	..	....	....	....	..	..	1	..	....	....	..	1	1	1		
6	..	25	5	1	..	..	..	3	12	30	22	1	..	36	18	19	..	..	9	..	1	62	2	2	33	43		

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN SULLIVAN COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total.	
																		M.	F.
Acworth	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Charlestown	1	....	....	....	..	..	1	..	..	..	..	..	1	....	....	..	1	2	2
Claremont	2	2	2	....	..	..	1	..	..	..	1	..	....	....	1	..	....	6	3
Cornish	..	1	....	....	..	..	..	..	..	..	..	..	1	....	....	..	....	....	2
Croydon	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Goshen	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Grantham	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Langdon	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Lempster	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Newport	1	....	1	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	2
Plainfield	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Springfield	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Sunapee	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Unity	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	....
Washington	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Total	5	3	3	....	..	..	2	..	..	..	2	..	2	....	2	..	1	10	10

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.					Order 8.—Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	Total. M.	Total. F.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bone, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total. M.	Total. F.	Phlegmon.	Ulcer.	Skin Diseases.	Total. M.	Total. F.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	3	..	11
..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	6	14	..	20
2	..	4	1	..	..	1	1	..	..	5	4	..	..	..	..	..	..	..	..	..	1	..	1	..	30	25	..	55
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	..	13
..	..	3	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	4	1	..	5
1	..	1	..	..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	17	22	..	39
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8
..	..	..	..	..	1	..	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	7	5	..	12
..	..	1	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	..	10
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
3	..	10	1	..	1	1	6	..	..	11	11	..	1	1	..	..	1	..	1	..	1	..	1	..	103	107	..	210

TABLE No. XV.

TOWNS IN SULLIVAN COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																				
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.			
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Inmutrition.	Total.		Childbirth.	Parmenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Acworth	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Charlestown	..	..	..	..	..	..	..	1	....	1	..	..	....	2	....	1	....	3	1	4
Claremont	1	..	2	..	..	..	..	2	5	....	1	..	1	1	....	....	....	6	1	7
Cornish	..	..	..	..	..	..	..	..	....	....	..	..	....	2	....	....	....	2	....	2
Croydon	1	..	..	..	1	..	..	..	....	2	..	..	....	....	....	....	....	....	2	2
Goshen	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Grantham	2	..	..	..	..	1	..	..	3	....	..	..	....	....	1	....	....	3	1	4
Langdon	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Lempster	..	..	..	..	..	1	..	..	1	....	..	..	....	....	....	....	....	1	....	1
Newport	1	1	1	..	..	1	..	..	3	1	..	..	....	2	5	....	....	5	6	11
Plainfield	..	..	..	..	..	..	1	..	....	1	..	..	....	....	....	....	....	....	1	1
Springfield	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Sunapee	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	1	....	1	....	1
Unity	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Washington	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Total	5	1	3	..	1	3	1	3	12	5	1	..	1	10	8	2	....	24	14	38

-Continued.

CLASS V.—VIOLENT DEATHS.																															Grand Total for all Classes.			
Order 1.—Accident and Negligence.								Order 2.		Order 3.—Suicide.										Order 4.—Various.				Total for Class V.										
Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.									
					M.	F.		M.	F.							M.	F.			M.	F.	M.	F.												
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	9	6	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	16	18	...	34
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	1	2	1	3	56	47	...	103
...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	10	12	...	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	5	6	...	11
...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	5	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	2	10	6	...	16
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	...	6
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	3	...	9
...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	2	35	45	...	80
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	7	7	...	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	7	...	17
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	2	8	7	...	15
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	9	10	...	19
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	6	...	13
...	...	1	1	1	2	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	9	4	12	5	17	194	188	...	382

TABLE No. XV.

CLASS I.—

ORDER 1.—Miasmatic.

TOWNS IN GRAFTON COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Alexandria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Ashland	..	..	..	1	..	2	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Bath	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Benton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bethlehem	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bridgewater	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Bristol	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Campton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Canaan	..	..	..	1	..	..	3	..	..	..	..	..	..	..	1	..	..	..	3	..	..	..	..
Dorchester	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Easton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ellsworth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Enfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	3	..	..	1	..
Franconia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grafton	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..
Groton	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	5	..	..	..	..
Hanover	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..
Haverhill	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Hebron	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Holderness	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Landaff	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Lebanon	..	..	..	..	..	..	5	2	..	1	..	..	..	..	2	..	..	..	11	..	..	2	..
Lincoln	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lisbon	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..
Littleton	..	..	..	4	..	..	..	1	..	..	..	..	..	..	2	..	..	..	1	..	..	..	..
Livermore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lyman	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lyme	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Monroe	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orange	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Orford	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Piermont	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plymouth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	1	..
Rumney	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
Thornton	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Warren	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..
Waterville	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wentworth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
Woodstock	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..
Total	..	..	..	13	..	2	9	6	4	4	..	2	1	..	7	..	..	..	54	..	..	4	..

—*Continued.*

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2—Enthetic. Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3.—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	3	..	3
..	..	..	..	2	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5
..	..	..	..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	....	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
1	..	..	..	4	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	2	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	....	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	1	..	..	14	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	10	..	24
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	1	..	1
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	2	..	2
..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	....	..	1
..	..	..	..	2	1	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	....	....	..	....
..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
1	1	..	..	52	56	..	..	..	..	3	..	2	1	..	..	..	..	..	..	..	..	..	..	..	54	57	..	111

TABLE No. XV.

TOWNS IN GRAFTON COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.						Total for for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.							M.	F.			
Alexandria	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	1	..	..	1	....	1	....	1
Ashland	..	..	..	..	..	..	..	..	..	1	1	....	..	..	..	1	..	..	1	....	2	....	2
Bath	..	..	..	1	..	..	..	..	..	..	....	1	..	..	..	2	..	..	....	2	....	3	3
Benton	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Bethlehem	..	..	..	1	..	..	..	..	..	..	....	1	..	..	..	1	..	..	....	1	....	2	2
Bridgewater	..	..	1	..	..	..	..	..	..	..	....	1	..	..	..	1	..	..	1	....	1	1	2
Bristol	..	..	..	1	..	..	..	..	..	..	1	....	..	..	..	2	..	..	1	1	2	1	3
Campton	..	..	..	2	..	..	..	..	..	..	....	2	..	..	..	2	..	..	1	1	1	3	4
Canaan	..	1	..	1	..	..	..	..	..	..	....	2	..	..	..	3	..	..	1	2	1	4	5
Dorchester	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Easton	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	1	..	..	1	....	1	....	1
Ellsworth	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	1	..	..	1	....	1	....	1
Enfield	..	..	..	1	..	..	..	..	..	..	....	1	..	..	..	3	..	..	....	3	....	4	4
Franconia	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	1	..	..	....	1	....	1	1
Grafton	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Groton	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	3	..	..	3	....	3	....	3
Hanover	..	..	..	1	..	..	..	..	..	..	1	....	..	..	..	2	..	..	1	1	2	1	3
Haverhill	..	1	..	1	..	..	1	..	..	..	2	1	..	..	..	2	..	..	1	1	3	2	5
Hebron	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Holderness	..	..	1	..	..	..	..	..	..	..	1	....	1	..	..	2	..	..	2	1	3	1	4
Landaff	..	..	..	..	..	..	..	..	..	..	....	....	1	..	..	..	..	..	1	....	1	....	1
Lebanon	..	1	..	5	..	..	1	..	..	1	3	5	..	..	..	5	..	..	1	4	4	9	13
Lincoln	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Lisbon	..	1	..	1	..	1	..	..	..	1	2	2	..	..	10	..	..	..	3	7	5	9	14
Littleton	..	..	..	2	..	1	..	..	..	..	2	1	..	..	7	..	..	..	5	2	7	3	10
Livermore	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Lyman	..	..	..	..	..	1	..	..	..	..	1	....	..	..	..	1	..	..	1	....	2	....	2
Lyme	..	..	..	1	..	..	..	..	..	..	....	1	..	..	..	1	..	..	....	1	....	2	2
Monroe	..	..	..	1	..	..	..	..	..	..	1	....	..	..	..	1	..	..	....	1	1	1	2
Orange	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Orford	..	..	1	..	..	..	..	..	..	..	1	....	..	..	..	1	..	..	....	1	1	1	2
Piermont	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Plymouth	..	..	1	..	..	..	..	..	1	..	1	1	..	..	1	..	..	..	....	1	1	2	3
Rumney	..	..	1	..	..	..	..	..	..	..	1	....	..	..	1	..	..	..	1	....	2	....	2
Thornton	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Warren	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	..	..	....	1	....	1	1
Waterville	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Wentworth	..	..	..	..	..	..	..	..	..	..	....	....	..	..	..	..	..	..	....	....	....	....	....
Woodstock	..	..	..	..	..	..	..	..	..	..	....	....	..	..	1	..	..	..	....	1	....	1	1
Total	..	4	5	19	..	3	2	..	1	3	18	19	2	..	58	..	..	..	27	33	45	52	97

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.												Order 2.—Circulatory System.					Order 3.—Respiratory System.										
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain diseases.	Total.		Pericarditis.	Aneurism.	Heart Disease.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
..	..	6	1	..	..	..	..	..	..	3	4	..	..	1	1	....	..	..	1	..	..	....	1	..	....	1
1	..	3	..	..	..	..	..	..	2	3	3	..	..	1	1	....	..	..	....	..	..	5	..	..	4	2
..	..	..	1	..	..	..	..	..	..	....	1	..	..	1	1	....	..	..	....	..	..	....	..	..	....	....
..	..	1	..	..	..	..	..	..	1	....	2	..	..	1	1	....	..	..	....	..	..	1	..	..	1	....
2	..	..	..	..	..	..	..	..	1	3	....	..	..	1	1	....	..	..	....	..	..	....	..	..	....	....
..	..	1	..	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	1	..	..	....	..	..	1	....
1	..	..	..	..	..	..	..	..	..	1	....	..	..	....	....	....	..	..	....	..	..	6	..	..	2	4
..	..	..	..	..	..	..	..	1	2	3	....	..	..	1	1	....	..	..	....	..	..	1	..	..	....	1
..	..	1	1	..	..	..	..	..	..	2	....	..	..	1	....	1	..	..	2	1	..	2	..	..	4	1
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
1	..	..	..	..	..	..	..	..	..	....	1	..	..	....	....	....	..	..	....	1	..	....	..	..	....	1
..	1	..	..	..	..	..	..	..	..	....	1	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
..	..	..	2	..	..	..	..	2	..	3	1	..	..	5	....	5	..	..	1	..	1	4	..	..	2	4
..	..	..	1	..	..	..	..	..	..	....	1	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1
..	..	1	1	..	..	..	..	1	..	1	2	..	..	2	2	....	..	..	2	..	..	6	..	..	3	5
..	..	1	..	1	..	..	1	..	..	....	3	..	..	....	....	....	..	..	2	1	..	3	..	..	2	4
..	..	5	..	1	..	..	..	..	2	4	4	..	..	4	3	1	..	..	1	..	..	1	..	..	1	1
..	..	7	2	3	..	..	..	..	3	4	11	..	..	6	2	4	..	..	....	..	..	3	..	..	2	1
..	..	1	1	..	..	..	..	..	..	1	1	..	..	1	1	....	..	..	....	..	..	1	..	..	1	....
1	..	2	..	..	..	..	..	..	..	2	1	..	..	2	....	2	..	..	....	..	..	1	..	..	1	....
..	..	1	..	..	..	..	..	..	..	....	1	..	..	3	2	1	..	..	....	..	..	1	..	..	1	....
1	..	8	..	..	..	1	..	2	3	6	9	..	..	8	2	6	..	..	....	..	..	8	1	..	4	5
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
1	..	2	2	..	..	..	..	..	..	3	2	..	..	5	3	2	..	..	....	..	..	2	..	..	1	1
6	..	3	2	..	..	1	..	..	2	6	8	..	..	6	2	4	..	..	....	..	..	13	..	..	6	7
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
1	..	..	1	..	..	..	..	..	..	2	....	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1
..	..	1	..	..	..	1	..	..	3	2	3	..	..	4	3	1	..	..	....	..	..	5	..	1	4	2
1	..	1	..	..	..	..	..	1	..	3	....	..	..	....	....	....	..	..	....	..	..	3	..	..	....	3
..	..	..	..	..	..	..	..	..	..	....	....	1	..	....	1	....	..	..	....	1	..	....	..	..	....	1
..	..	1	2	..	..	..	..	..	1	2	2	..	..	1	....	1	..	..	....	..	..	3	..	..	1	2
..	..	..	..	..	..	1	..	..	..	....	1	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
..	..	4	1	..	..	..	..	..	..	3	2	..	..	6	4	2	..	..	....	..	..	4	..	..	1	3
1	..	..	..	..	..	..	..	..	..	1	....	..	..	3	1	2	..	..	1	..	..	7	..	..	6	2
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	1	..	..	....	1
..	..	..	..	..	..	..	..	..	..	....	....	..	..	2	1	1	..	..	....	..	..	1	..	..	....	1
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
..	..	1	1	..	..	..	..	..	..	1	1	..	..	1	....	1	..	..	....	..	..	....	..	..	....	....
..	..	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	..	..	....	..	..	....	..	..	....	....
17	1	51	19	5	..	4	1	7	20	60	65	1	..	66	32	35	..	..	11	4	1	84	2	1	48	55

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN GRAFTON COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total.	
																		M.	F.
Alexandria	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Ashland	2	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	2
Bath	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	1	....
Benton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Bethlehem	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Bridgewater	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Bristol	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Campton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	2	..	....	1	1
Canaan	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Dorchester	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Easton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Ellsworth	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Enfield	1	1	....	....	..	..	1	1	..	..	..	..	....	....	....	..	1	2	3
Franconia	..	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	....
Grafton	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Groton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Hanover	..	....	1	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	1
Haverhill	..	2	1	....	..	..	1	..	..	..	1	..	....	1	....	..	....	4	2
Hebron	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Holderness	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Landaff	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Lebanon	1	....	....	....	..	..	..	..	..	..	1	..	....	....	....	..	....	1	1
Lincoln	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Lisbon	2	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	1	3	....
Littleton	..	....	3	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	3
Livermore	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Lyman	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Lyme	..	1	....	....	..	..	1	..	..	..	..	..	....	....	....	..	....	1	1
Monroe	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Orange	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Orford	1	....	....	....	..	1	..	..	..	..	..	..	....	....	....	..	....	....	2
Piermont	..	....	....	....	..	..	..	..	..	..	..	..	1	....	....	..	....	....	1
Plymouth	1	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Rumney	2	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	1
Thornton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Warren	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	1	....
Waterville	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Wentworth	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Woodstock	..	....	....	....	..	..	..	..	..	..	..	..	....	....	1	..	....	1	....
Total	10	8	7	....	..	1	3	1	..	..	3	..	1	1	5	..	3	22	21

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DISEASES.—*Continued.*

Order 5.—Urinary Organs.												Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.				Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.).	Cystitis.	Prostate, Disease of.	Kidney Diseases.	Bladder, Diseases of.	Testicles, Disease of.	M.	F.	Total.	Ovarian Dropsy.	Disease of Uterus.	Total.	Bone, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	M.	F.	Total.	Phlegmon.	Ulcer.	Skin Diseases.	M.	F.	Total.	Male.	Female.	Sex not stated.	Total.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	5	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	7	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
2	..	..	..	..	1	..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	6
..	..	1	1	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	6	..	9
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	2	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	2	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	13	..	20
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	..	4
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	8	..	15
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	8	..	10
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	7	..	17
..	..	..	1	..	2	..	..	..	..	3	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	16	18	..	34
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
1	..	2	..	..	1	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17	21	..	38
..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	5	..	15
..	..	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	18	22	..	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	..	5
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	7	..	17
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	8	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
1	..	1	1	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	11	9	..	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	5	..	14
..	..	1	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	2	..	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
6	..	13	4	..	6	..	1	..	..	24	6	..	..	..	..	1	..	..	1	..	..	2	..	..	1	1	..	188	183	..	371

TABLE No. XV.

TOWNS IN GRAFTON COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																					
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Alexandria	..	..	..	..	..	..	..	..	....	....	..	..	....	2	5	....	....	2	5	7
Ashland	..	..	..	..	..	..	..	..	....	....	1	..	1	....	2	1	....	1	3	4
Bath	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Benton	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Bethlehem	..	2	..	..	..	..	..	..	1	1	..	..	....	....	....	....	....	1	1	2
Bridgewater	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Bristol	4	..	..	..	..	..	..	..	4	....	1	..	1	3	1	1	....	8	2	10
Campton	2	..	..	..	..	..	..	..	....	2	..	..	....	1	2	....	....	1	4	5
Canaan	1	..	..	..	..	..	..	..	1	....	..	..	....	4	3	....	1	5	4	9
Dorchester	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Easton	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Ellsworth	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Enfield	3	..	..	..	..	..	..	..	3	....	..	..	....	2	2	....	1	5	3	8
Franconia	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Grafton	3	1	1	..	..	..	..	..	3	2	..	..	....	1	1	....	....	4	3	7
Groton	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Hanover	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Haverhill	2	..	..	..	..	..	..	..	1	1	..	..	....	3	1	1	....	5	2	7
Hebron	..	2	..	..	..	..	..	..	....	2	..	..	....	....	....	....	....	....	2	2
Holderness	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Landaff	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Lebanon	..	2	..	..	..	1	..	..	1	2	..	..	....	2	4	1	....	4	6	10
Lincoln	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Lisbon	..	..	..	1	..	..	..	..	1	....	..	..	....	2	1	....	....	3	1	4
Littleton	..	..	..	..	..	..	..	1	....	1	..	..	....	1	4	....	....	1	5	6
Livermore	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Lyman	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Lyme	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	1	....	1	1
Monroe	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Orange	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Orford	..	..	..	..	..	..	..	..	....	....	..	..	....	3	1	....	1	3	2	5
Piermont	..	..	..	..	..	..	..	1	1	....	..	..	....	1	3	....	....	2	3	5
Plymouth	1	..	..	..	..	..	..	..	....	1	..	..	....	....	....	....	....	....	1	1
Rumney	..	..	1	..	..	..	..	..	....	1	..	..	....	1	....	....	....	1	1	2
Thornton	2	..	..	..	..	..	..	..	....	2	..	..	....	....	1	....	....	....	3	3
Warren	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Waterville	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Wentworth	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Woodstock	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1	....	....	1	1	2
Total	18	7	2	1	..	1	..	2	16	15	2	..	2	29	33	4	4	49	54	103

—*Continued.*

CLASS V.—VIOLENT DEATHS.																																			Grand Total for all Classes.			
Order 1.—Accident and Negligence.											Order 2.		Order 3.—Suicide.										Order 4.—Various.				Total for Class V.											
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	M.	F.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	M.	F.	Total.	Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.	Male.	Female.	Not stated.	Total.							
											M.	F.								M.	F.				M.	F.													
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..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	13	..	27							
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..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..	1	9	3	..	12							
..	..	..	..	..	..	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	2	18	10	..	28							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	9	9	..	18							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	1	3	4	18	18	..	36							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							
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..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	1	1	1	2	16	23	..	39							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	2	4	..	6							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	2	3	13	15	..	28							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2	9	12	..	21							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	12	..	27							
..	..	1	1	..	3	4	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	1	2	5	4	9	31	26	..	57							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3	..	6							
..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	1	3	11	6	..	17							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	8							
3	..	..	1	1	..	..	2	3	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	3	3	6	42	49	..	91							
..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	..	..	..	2							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	2	3	20	19	..	39							
1	..	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	7	3	10	35	39	..	74							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							
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..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	2	12	11	..	23							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	6	4	..	10							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	3	1	..	4							
1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	8	13	..	21							
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..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3	1	4	16	16	..	32							
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..							
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..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3	..	7							
5	..	..	4	3	..	8	16	4	..	..	..	..	..	..	..	1	..	..	1	2	3	1	..	..	..	20	23	39	28	67	375	374	..	749							

TABLE No. XV.

CLASS I.—

ORDER 1.—Miasmatic.

TOWNS IN COÖS COUNTY.	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Berlin	..	..	..	19	..	1	6	..	..	..	..	..	..	..	7	..	..	..	6	..	..	..	..
Cambridge	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Carroll	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clarksville	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..
Colebrook	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2	..	..	..	4
Columbia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Dalton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dummer	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Errol	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Gorham	..	..	..	..	..	..	2	..	..	..	..	..	..	..	3	..	..	..	1	..	..	..	1
Jefferson	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lancaster	..	..	..	..	..	1	2	..	..	1	..	..	..	..	3	..	..	..	1	..	..	..	..
Milan	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..
Millsfield	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northumberland	..	..	..	1	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
Pittsburg	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Randolph	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Shelburne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stark	..	..	..	5	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
Stewartstown	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Stratford	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Whitefield	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	30	..	2	10	2	1	2	..	1	..	..	21	..	..	..	11	1	..	1	7

—Continued.

ZYMOTIC DISEASES.

Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total. M.	Total. F.	Order 2.—Enthetic. Glanders.	Gonorrhœa.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total. M.	Total. F.	Order 3—Dietic. Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total. M.	Total. F.	Order 4.—Parasitic. Aphthæ.	Worms.	Other Parasites.	Total. M.	Total. F.	Total for Class I. Male.	Female.	Sex not stated.	Total.
..	..	..	..	23	16	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	23	17	..	40
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
..	..	..	..	3	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	5	..	8
..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
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..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	5	2	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	6	2	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	6	..	8
..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3
..	..	..	..	48	41	..	..	..	..	3	..	1	2	..	..	..	..	..	..	..	..	..	..	..	49	43	..	92

TABLE No. XV.

TOWNS IN COÖS COUNTY.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.							Total for for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.							M.	F.			
Berlin	..	..	..	2	..	..	..	..	1	..	....	3		..	..	4	1	..	1	4	1	7	8
Cambridge	..	..	..	..	..	..	..	..	..	..	....	....		..	..	..	..	..	....	....	....	....	....
Carroll	..	..	..	..	..	..	..	..	..	..	....	....		..	..	1	..	..	....	1	....	1	1
Clarksville	..	..	..	..	..	..	..	..	..	..	....	....		..	..	2	..	..	1	1	1	1	2
Colebrook	..	..	..	2	..	1	..	..	..	..	3	....		1	..	2	..	..	1	2	4	2	6
Columbia	..	..	..	..	..	..	..	..	..	..	....	....		..	..	..	..	..	....	....	....	....	....
Dalton	..	..	..	..	..	..	..	..	..	..	....	....		..	..	3	..	..	....	3	....	3	3
Dummer	..	..	..	..	..	..	..	..	..	..	....	....		..	..	2	..	..	....	2	....	2	2
Errol	..	..	..	..	..	..	..	..	..	..	....	....		..	..	..	..	..	....	....	....	....	....
Gorham	..	..	..	1	..	..	..	..	..	..	1	....		..	..	1	..	..	....	1	1	1	2
Jefferson	..	..	..	2	..	..	..	..	..	..	....	2		..	..	1	..	..	....	1	....	3	3
Lancaster	..	..	..	1	1	1	..	..	..	..	....	3		..	..	3	1	..	1	3	1	6	7
Milan	..	..	..	..	..	1	..	..	..	..	....	1		..	..	1	..	..	....	1	....	2	2
Millsfield	..	..	..	..	..	..	..	..	..	..	....	....		..	..	..	..	..	....	....	....	....	....
North'mberl'd	..	..	..	..	..	1	..	..	..	..	....	1		..	..	3	..	..	1	2	1	3	4
Pittsburg	..	..	..	..	..	..	..	..	..	..	....	....		..	..	..	..	..	....	....	....	....	....
Randolph	..	..	..	..	..	..	..	..	..	..	....	....		..	..	1	..	..	....	1	....	1	1
Shelburne	..	..	..	..	..	..	..	..	..	..	....	....		..	..	..	..	..	....	....	....	....	....
Stark	..	..	..	..	..	..	..	..	..	..	....	....		..	..	2	..	..	1	1	1	1	2
Stewartstown	..	..	..	..	..	..	..	..	..	..	....	....		..	..	1	..	..	1	....	1	....	1
Stratford	..	1	..	2	..	1	..	..	..	..	....	4		..	..	1	1	..	....	2	....	6	6
Whitefield	..	..	1	2	..	..	..	..	..	..	....	3		1	1	4	..	..	1	5	1	8	9
Total	..	1	1	12	1	5	..	..	1	..	4	17		2	1	32	3	..	8	30	12	47	59

—*Continued.*

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.													Order 2.—Circulatory System.					Order 3.—Respiratory System.												
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain Diseases.	Total.			Pericarditis.	Aneurism.	Heart Diseases.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.		
										M.	F.					M.	F.									M.	F.		
9	..	..	1	..	..	..	..	1	..	7	4		..	..	2	1	1	..	..	..	..	....	9	..	..	5	4		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
1	..	..	..	..	..	..	..	..	..	....	1		..	..	1	1	....	..	..	..	..	....	4	..	..	3	1		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
2	..	..	..	..	..	..	..	..	..	1	1		..	..	1	1	....	..	..	..	..	....	7	..	1	6	2		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	3	..	..	2	1		
1	..	..	..	..	..	..	..	..	..	1	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	1	..	..	....	1		
..	..	2	..	..	..	1	..	1	..	3	1		..	..	1	1	....	..	..	1	..	....	3	..	..	3	1		
2	..	..	2	..	..	..	..	..	..	2	2		..	..	1	1	....	..	..	..	..	....	2	..	..	....	2		
1	..	..	..	..	..	..	..	1	2	2	2		..	..	5	5	....	..	..	..	..	....	2	..	..	2	....		
..	..	..	..	..	..	..	..	3	..	1	2		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	1	2	..	..	..	..	..	..	..	2	1		..	..	1	1	....	..	..	..	..	....	2	1	..	1	2		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	1	..	..	1	....		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	3	..	..	1	2		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	....	....	....	..	..	..	..	....	....	..	..	....	....		
..	..	..	..	..	..	..	..	..	..	....	....		..	..	1	1	....	..	..	..	..	....	2	..	..	2	....		
1	..	..	2	..	..	..	1	..	..	2	2		..	..	1	....	1	..	..	..	..	....	4	..	1	3	2		
..	1	..	..	..	..	..	..	..	..	....	1		..	..	1	....	1	..	..	..	..	....	2	..	..	1	1		
2	..	2	..	..	..	..	..	..	1	2	3		..	..	6	3	3	..	..	1	..	....	4	..	..	3	2		
19	2	6	5	..	..	1	1	6	3	23	20		..	..	21	15	6	..	..	2	..	....	49	1	2	33	21		

TABLE No. XV.

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

TOWNS IN COÖS COUNTY.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total. M.	Total. F.
Berlin	..	2	2	....	..	..	..	..	..	..	..	..	....	....	....	..	1	3	2
Cambridge	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Carroll	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Clarksville	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Colebrook	1	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	2
Columbia	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Dalton	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Dummer	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Errol	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Gorham	..	1	...	1	..	..	..	..	..	..	..	..	1	....	....	..	1	1	3
Jefferson	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Lancaster	1	....	4	....	..	..	..	..	..	..	..	..	1	....	....	..	....	3	3
Milan	..	....	....	....	..	..	..	..	..	..	1	..	1	....	....	..	....	....	2
Millsfield	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Northumberland	..	....	....	....	..	..	..	..	..	..	..	..	1	....	....	..	....	1	....
Pittsburg	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Randolph	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Shelburne	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Stark	..	....	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	....
Stewartstown	2	....	....	....	..	..	..	..	..	..	..	..	....	....	..	..	....	1	1
Stratford	..	1	....	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Whitefield	..	....	1	....	..	..	..	..	..	..	..	..	....	....	....	..	....	....	1
Total	4	4	8	1	..	..	..	..	..	..	1	..	4	....	....	..	2	9	15

—*Continued.*

DISEASES.—*Continued.*

Order 5.—Urinary Organs.													Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.				Order 8.—Integumentary System.					Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc.)	Cystitis.	Prostate, Disease of.	Kidney Disease.	Bladder, Disease of.	Testicles, Disease of.	Total.			Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Diseases of.	Joint Diseases.	Vertebræ, Diseases of.	Total.			Phlegmon.	Ulcer.	Skin Diseases.	Total.		Male.	Female.	Sex not stated.	Total.
										M.	F.								M.	F.					M.	F.				
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	11	..	27
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	2	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	5	..	14
..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	..	4
..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	1	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	5	..	13
..	..	2	..	..	..	..	1	..	..	2	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	6	5	..	11
..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	6	..	18
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	..	6
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	..	3
..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3
..	..	1	1	..	1	..	..	..	..	1	2	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	7	9	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	..	5
..	..	..	..	2	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	9	10	..	19
..	..	7	1	2	3	..	3	..	..	11	5	..	..	..	..	2	..	1	1	..	..	..	..	..	..	..	92	68	..	160

TABLE No. XV.

TOWNS IN COÖS COUNTY.	CLASS IV.—DEVELOPMENTAL DISEASES.																					
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth.	Paramenia.	Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Berlin	..	12	3	..	..	..	1	1	8	9	..	..	....	1	....	....	....	9	9	18
Cambridge	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Carroll	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Clarksville	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Colebrook	..	..	1	..	..	..	..	..	....	1	..	..	....	3	1	....	....	3	2	5
Columbia	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Dalton	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Dummer	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Errol	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Gorham	..	1	..	..	..	..	..	..	....	1	..	..	....	....	....	....	....	....	1	1
Jefferson	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	....	....	....	1	1
Lancaster	4	..	..	..	..	..	..	..	2	2	..	..	....	4	4	....	....	6	6	12
Milan	..	..	..	..	..	..	..	1	....	1	..	..	....	....	2	....	....	....	3	3
Millsfield	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Northumberla'd	1	..	..	..	..	..	..	..	....	1	..	..	....	1	....	....	....	1	1	2
Pittsburg	..	..	..	..	..	..	..	..	....	....	..	..	....	....	1	2	1	2	2	4
Ran olph	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Shelburne	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Stark	..	..	..	..	..	..	..	..	....	....	..	..	....	1	....	....	....	1	....	1
Stewartstown	..	..	2	..	..	..	..	..	1	1	..	..	....	....	3	....	....	1	4	5
Stratford	..	..	..	..	..	..	..	..	....	....	..	..	....	....	....	....	....	....	....	....
Whitefield	3	..	1	..	..	..	..	..	1	3	..	..	....	....	1	....	....	1	4	5
Total	8	13	7	..	..	..	1	2	12	19	..	..	....	10	15	2	1	24	35	59

—*Continued.*

CLASS V.—VIOLENT DEATHS.																															Grand Total for all Classes.			
Order 1.—Accident and Negligence.									Order 2.			Order 3.—Suicide.										Order 4.—Various.				Total for Class V.							
Fracture and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.			Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.			Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.							
							M.	F.	M.	F.									M.	F.		M.	F.	M.	F.										
..	..	....	....	1	..	5	5	1	...	...	..	..	1	..	..	..	..	..	1	...	...	...	2	3	8	4	12	57	48	...	105
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	1	...	1	1	.....	1	...	1
..	..	....	....	..	..	1	1	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	1	1	2	1	3	6	4	...	10
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	1	1	1	1	2	2	5	...	7
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	1	1	...	...	...	...	1	...	1	20	14	...	34
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	1	...	1	...	1	4	2	...	6
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	1	1	1	1	2	3	5	...	8
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	3	2	...	5
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	1	1	...	2
..	..	....	....	1	..	..	1	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	5	2	6	2	8	21	11	...	32
..	..	....	....	..	..	1	1	...	...	...	..	..	..	..	..	..	..	1	1	...	...	...	2	1	4	1	5	10	10	...	20
..	..	....	....	..	..	1	1	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	2	...	3	...	3	24	24	...	48
..	..	....	....	..	..	1	1	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	1	1	2	1	3	5	12	...	17
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	.....	.....	.....	.....
..	..	....	....	..	..	1	1	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	2	...	3	...	3	12	8	...	20
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	3	2	...	5
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	2	4	...	6
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	1	.....	...	1
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	2	2	2	2	4	9	7	...	16
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	1	...	1	1	11	14	...	25
..	..	....	....	..	..	..	...	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	...	...	...	...	...	4	11	...	15
..	..	....	....	..	..	1	1	...	...	...	..	..	..	..	..	..	..	..	...	...	...	...	1	1	1	1	2	14	24	...	38
..	..	....	....	2	..	11	12	1	...	...	..	..	1	..	..	..	..	2	3	...	...	...	20	15	35	16	51	212	209	...	421

TABLE No. XV.

RECAPITULATION

COUNTIES.	CLASS I.																								
	ORDER 1.—Miasmatic.																								
	Carbuncle.	Cholera, Asiatic.	Cholera, Sporadic.	Cholera Infantum.	Cholera Morbus.	Croup (Pseudo-membranous).	Diphtheria.	Diarrhœa.	Dysentery.	Erysipelas.	Fever, Bilious.	Fever, Cerebro-spinal.	Fever, Intermittent.	Fever, Malarial.	Fever, Typhoid.	Fever, Typho-malarial.	Fever, Unspecified.	Fever, Yellow.	Influenza (Epidemic).	Measles.	Mumps.	Metria (Puerperal Fever).	Pertussis.
Rockingham	..	..	..	31	3	11	17	10	7	6	1	..	..	..	15	..	1	..	34	..	..	..	1
Strafford	..	..	..	36	..	8	18	10	4	4	..	3	..	..	11	..	..	..	30	1	..	1	15
Belknap	..	..	..	15	..	7	29	5	3	1	..	2	..	..	4	..	..	..	20	1	..	1	..
Carroll	..	..	..	9	..	2	2	2	1	3	..	1	..	..	2	..	..	..	15	..	..	..	..
Merrimack	..	..	..	44	2	5	20	2	4	8	..	3	..	..	10	..	1	..	42	2	..	2	3
Hillsborough	..	..	..	155	8	5	14	11	11	9	..	4	..	2	17	..	..	..	65	19	..	13	7
Cheshire	..	..	..	19	..	3	15	1	4	1	1	..	..	..	8	..	..	..	35	..	..	2	3
Sullivan	..	..	..	14	4	....	....	4	3	1	..	3	..	..	9	..	..	..	25	..	..	1	1
Grafton	..	..	..	13	..	2	9	6	4	4	..	2	1	..	7	..	..	..	54	..	..	4	..
Coös	..	..	..	30	..	2	10	2	1	2	..	1	..	..	21	..	..	..	11	1	..	1	7
Total	..	..	..	366	17	45	134	53	42	39	2	19	1	2	104	..	2	..	331	24	..	25	37

—*Continued.*

BY COUNTIES.

ZYMOTIC DISEASES.

						Order 2—Enthetic.									Order 3.—Dietic.						Order 4.—Parasitic.						Total for Class I.			
Tonsilitis.	Scarlatina.	Small-pox.	Varicella.	Total.		Glanders.	Gonorrhea.	Hydrophobia.	Malignant Pustule.	Septicæmia.	Syphilis.	Total.			Alcoholism.	Delirium Tremens.	Inanition.	Purpura and Scurvy.	Total.		Aphthæ.	Worms.	Other Parasites.	Total.			Male.	Female.	Sex not stated.	Total.
				M.	F.							M.	F.						M.	F.				M.	F.					
..	10	..	..	76	71	..	..	..	..	3	..	2	1		2	..	..	..	2	..	..	..	..	..	..	..	..	80	72	..	152
..	4	..	..	71	74	..	..	..	..	4	..	2	2		2	..	..	1	2	1	..	..	..	..	..	..	..	75	77	..	152
2	..	..	..	42	48	..	..	..	..	5	1	4	2		..	..	..	..	..	..	..	..	..	..	..	..	..	46	50	..	96
..	..	..	..	14	23	..	..	..	..	..	1	1	..		..	..	..	..	..	..	..	..	..	..	..	..	..	15	23	..	38
..	5	..	..	70	83	..	..	..	..	10	1	4	7		..	..	..	1	..	1	..	..	..	..	..	..	..	74	91	..	165
5	2	..	1	168	180	..	..	..	..	12	4	10	6		2	1	..	1	3	1	..	..	..	..	..	..	..	181	187	..	368
..	5	..	..	49	48	..	..	..	..	4	..	2	2		..	..	..	..	..	..	..	..	..	..	..	..	..	51	50	..	101
..	..	..	..	36	29	..	..	..	..	3	..	1	2		..	1	..	..	1	..	..	..	..	..	..	..	..	38	31	..	69
1	1	..	..	52	56	..	..	..	..	3	..	2	1		..	..	..	..	..	..	..	..	..	..	..	..	..	54	57	..	111
..	..	..	..	48	41	..	..	..	..	3	..	1	2		..	..	..	..	..	..	..	..	..	..	..	..	..	49	43	..	92
8	27	..	1	626	653	..	..	..	..	47	7	29	25		6	2	..	3	8	3	..	..	..	..	..	..	..	663	681	..	1,344

TABLE No. XV.

RECAPITULATION

COUNTIES.	CLASS II.—CONSTITUTIONAL DISEASES.																						
	ORDER 1.—Diathetic.													ORDER 2.—Tubercular.							Total for Class II.		
	Gout.	Dropsy.	Anæmia.	Cancer, Various.	Cancer of Breast.	Cancer of Stomach.	Cancer of Uterus.	Noma (Canker).	Mortification.	Rheumatism.	Total.			Scrofula.	Tabes Mesenterica.	Phthisis.	Hydrocephalus.	Tubercular Meningitis.	Total.		Male.	Female.	Total.
											M.	F.							M.	F.			
Rockingham	..	10	3	16	..	5	3	1	4	6	17	31	1	3	133	..	2	69	70	86	101	187
Strafford	..	7	8	16	..	4	..	1	4	..	16	24	1	1	84	1	4	34	57	50	81	131
Belknap	..	3	3	12	..	4	1	..	2	..	9	16	..	..	35	1	..	13	23	22	39	61
Carroll	..	1	2	6	..	3	2	..	..	1	6	9	2	..	36	1	2	19	22	25	31	56
Merrimack	..	8	3	22	2	3	4	..	2	3	16	31	4	1	100	1	7	51	62	67	93	160
Hillsborough	..	7	7	39	3	15	7	..	5	5	25	63	2	2	175	9	6	89	105	114	168	282
Cheshire	..	2	1	7	1	5	..	..	4	5	7	18	2	1	56	..	2	30	31	37	49	86
Sullivan	..	..	2	7	3	1	2	..	1	2	7	11	1	1	27	..	1	10	20	17	31	48
Grafton	..	4	5	19	..	3	2	..	1	3	18	19	2	..	58	..	..	27	33	45	52	97
Coös	..	1	1	12	1	5	..	..	1	..	4	17	2	1	32	3	..	8	30	12	47	59
Total	..	43	35	156	10	48	21	2	24	25	125	239	17	10	736	16	24	350	453	475	692	1,167

—*Continued.*

BY COUNTIES.

CLASS III.—LOCAL DISEASES.

Order 1.—Nervous System.												Order 2.—Circulatory System.					Order 3.—Respiratory System.										
Cephalitis.	Cerebritis.	Apoplexy.	Paralysis.	Insanity.	Chorea.	Epilepsy.	Tetanus.	Convulsions.	Brain diseases.	Total.		Pericarditis.	Aneurism.	Heart Disease.	Total.		Epistaxis.	Laryngitis.	Bronchitis, Acute.	Bronchitis, Chronic.	Pleurisy.	Pneumonia.	Asthma.	Lung Diseases.	Total.	
										M.	F.				M.	F.									M.	F.
23	2	41	29	2	..	2	..	11	9	55	64	..	..	99	58	41	..	..	21	6	2	96	4	1	48	82
21	3	21	17	2	..	3	..	10	14	43	48	..	..	69	32	37	..	2	13	7	3	96	3	1	51	74
8	..	9	21	2	..	4	1	1	4	29	21	2	..	33	18	17	..	..	2	1	..	55	..	2	23	37
7	..	19	10	2	..	1	..	2	6	21	26	..	..	25	19	6	..	..	8	2	1	50	..	3	34	30
18	..	40	28	13	..	4	1	8	29	73	68	3	..	70	41	32	..	..	17	4	1	137	4	5	76	92
38	7	79	51	3	..	2	..	23	35	124	114	2	1	134	71	66	..	2	80	17	6	175	3	3	150	136
16	..	17	24	3	..	..	..	7	8	41	34	2	..	46	26	22	..	..	12	1	..	86	3	1	54	49
6	..	25	5	1	..	..	..	3	12	30	22	1	..	36	18	19	..	..	9	..	1	62	2	2	33	43
17	1	51	19	5	..	4	1	7	20	60	65	1	..	66	32	35	..	..	11	4	1	84	2	1	48	55
19	2	6	5	..	..	1	1	6	3	23	20	..	..	21	15	6	..	..	2	..	..	49	1	2	33	21
173	15	308	209	33	..	21	4	78	140	499	482	11	1	589	330	281	..	4	175	42	15	890	22	21	550	619

TABLE No. XV.

RECAPITULATION

CLASS III.—LOCAL

ORDER 4.—Digestive Organs.

COUNTIES.	Gastritis.	Enteritis.	Peritonitis.	Ascites.	Ulceration of Intestines.	Hernia.	Ileus.	Intussusception.	Stricture of Intestines.	Fistula.	Stomach Diseases.	Pancreas Diseases.	Hepatitis.	Jaundice.	Liver Diseases.	Spleen Diseases.	Bowel Diseases.	Total.	
																		M.	F.
Rockingham	10	6	13	....	..	1	..	..	..	1	..	..	4	1	6	..	5	22	25
Strafford	7	7	20	....	..	2	..	..	..	..	11	..	2	2	2	..	4	26	31
Belknap	2	7	7	....	..	..	2	..	..	..	4	..	....	....	2	1	3	14	14
Carroll	6	4	1	....	..	1	1	..	..	..	3	..	1	....	4	..	4	10	15
Merrimack	7	13	10	....	..	3	3	..	..	..	7	..	1	1	8	..	7	29	31
Hillsborough	12	12	21	4	..	3	5	..	..	..	8	..	4	3	15	..	6	38	55
Cheshire	5	8	4	....	..	2	3	1	..	1	2	..	1	....	4	..	4	17	18
Sullivan	5	3	3	....	..	..	2	..	..	..	2	..	2	....	2	..	1	10	10
Grafton	10	8	7	....	..	1	3	1	..	..	3	..	1	1	5	..	3	22	21
Coös	4	4	8	1	..	..	..	..	..	..	1	..	4	....	....	..	2	9	15
Total	68	72	94	5	..	13	19	2	..	2	41	..	20	8	48	1	39	197	235

—*Continued.*

BY COUNTIES.

DISEASES.—*Continued.*

Order 5.—Urinary Organs.											Order 6.—Generative Organs.			Order 7.—Osseous and Locomotory System.						Order 8.—Integumentary System.						Total for Class III.			
Nephritis.	Ischuria.	Nephria (Bright's Disease).	Diabetes.	Calculus (Gravel, etc).	Cystitis.	Prostate, Disease of.	Kidney Disease.	Bladder, Diseases of.	Testicles, Diseases of.	Total.		Ovarian Dropsy.	Disease of Uterus.	Total.	Bones, Disease of.	Joint Diseases.	Vertebræ, Diseases of.	Total.		Phlegmon.	Ulcer.	Skin Diseases.	Total.		Males.	Females.	Sex not stated.	Total.
										M.	F.							M.	F.				M.	F.				
9	..	24	4	..	3	3	4	..	..	29	18	1	...	1	1	..	..	1	...	2	..	..	...	2	213	233	..	446
2	..	17	1	..	3	..	1	1	..	19	6	1	1	2	1	1	..	1	1	3	..	1	1	3	173	202	..	375
2	..	8	3	..	1	2	4	..	..	11	9	...	...	...	..	..	..	...	...	..	..	..	...	...	95	98	..	193
..	..	4	7	..	2	..	3	1	..	13	4	...	2	2	..	..	..	...	...	..	..	..	...	...	97	83	..	180
9	..	18	2	1	2	..	6	..	..	15	23	...	...	...	1	1	..	1	1	1	..	1	1	1	236	248	..	484
16	..	28	12	..	6	..	7	4	..	40	33	...	...	...	2	..	..	2	...	1	..	..	...	1	425	405	..	830
..	..	7	1	..	1	..	4	1	..	10	4	2	1	3	1	..	.	1	...	2	..	1	2	1	151	131	..	282
3	..	10	1	..	1	1	6	..	..	11	11	...	1	1	..	..	1	...	1	..	1	..	1	...	103	107	..	210
6	..	13	4	..	6	..	1	..	..	24	6	...	...	...	1	..	..	1	...	2	..	..	1	1	188	183	..	371
..	..	7	1	2	3	..	3	..	..	11	5	...	...	...	..	2	..	1	1	..	..	..	...	...	92	68	..	160
47	..	136	36	3	28	6	39	7	..	183	119	4	5	9	7	4	1	8	4	11	1	3	6	9	1,773	1,758	..	3,531

TABLE No. XV.

COUNTIES.	CLASS IV.—DEVELOPMENTAL DISEASES.																			
	ORDER 1.—Of Children.										ORDER 2.—Of Women.			ORDERS 3 and 4.				Total for Class IV.		
	Still-born.	Debility, Infantile.	Debility, Premature Birth.	Cyanosis.	Spina Bifida.	Other Malformations.	Teething.	Innutrition.	Total.		Childbirth, Paramenia.		Total.	Old Age.		Atrophy and Debility.		Male.	Female.	Total.
									M.	F.				M.	F.	M.	F.			
Rockingham..	21	2	13	..	1	2	..	15	34	20	2	..	2	35	34	3	4	72	60	132
Strafford.....	17	18	11	2	2	5	1	11	36	31	1	..	1	13	32	4	1	53	65	118
Belknap.....	7	5	2	..	1	1	..	1	10	7	1	..	1	13	17	3	4	26	29	55
Carroll.....	2	1	5	1	..	..	..	2	8	3	2	..	2	5	8	2	2	15	15	30
Merrimack ...	30	6	12	5	..	1	..	11	42	23	3	1	4	29	43	7	6	78	76	154
Hillsborough.	90	40	25	1	2	6	8	28	116	84	4	2	6	26	40	9	16	151	146	297
Cheshire.....	7	8	2	1	..	2	..	6	17	9	3	..	3	14	27	....	1	31	40	71
Sullivan.....	5	1	3	..	1	3	1	3	12	5	1	..	1	10	8	2	....	24	14	38
Grafton.....	18	7	2	1	..	1	..	2	16	15	2	..	2	29	33	4	4	49	54	103
Coös.....	8	13	7	..	..	..	1	2	12	19	..	..	....	10	15	2	1	24	35	59
Total.....	205	101	82	11	7	21	11	81	303	216	19	3	22	184	257	36	39	523	534	1,057

—*Continued.*

CLASS V.—VIOLENT DEATHS.																																Grand Total for all Classes.
Order 1.—Accident and Negligence.									Order 2.		Order 3.—Suicide.										Order 4.—Various.				Total for Class V.							
Fractures and Contusions.	Wounds, Unspecified.	Burns and Scalds.	Poison.	Drowning.	Suffocation.	Various.	Total.		Homicide.		Wounds, Unspecified.	Wounds, Pistol or Gunshot.	Wounds, Knife.	Poison.	Drowning.	Hanging.	Otherwise.	Total.		Violent, not Classed.		Cause not Reported or Unclassified.		Male.	Female.	Total.	Males.	Females.	Not stated.	Total.			
							M.	F.	M.	F.								M.	F.	M.	F.	M.	F.										
8	4	2	..	10	1	10	30	5	1	...	...	...	...	...	...	1	3	4	...	2	...	38	29	75	34	109	524	500	2*	1,026		
2	..	....	....	8	..	16	22	4	...	...	..	2	..	1	..	2	1	5	1	...	...	31	25	58	30	88	409	455	...	864		
2	..	....	....	5	..	3	9	1	1	1	...	...	...	...	...	2	4	6	...	...	...	6	11	22	13	35	211	229	...	440		
3	..	....	....	2	..	4	9	...	...	...	...	...	...	...	...	...	2	2	...	...	...	20	7	31	7	38	183	159	...	342		
8	..	5	2	6	2	19	36	6	...	...	...	...	...	...	...	1	6	7	...	...	...	29	23	72	29	101	524	537	3*	1,064		
8	1	4	4	9	4	18	30	18	...	...	..	3	..	1	2	..	5	8	3	...	...	139	117	177	138	315	1,036	1,044	12*	2,092		
3	..	1	..	3	..	14	18	3	...	...	...	...	...	2	..	3	2	4	3	...	...	21	19	43	25	68	313	295	...	608		
.	..	....	....	1	1	1	2	1	...	...	...	...	...	...	...	...	1	1	...	...	...	9	4	12	5	17	194	188	...	382		
5	..	....	4	3	..	8	16	4	...	...	...	...	...	1	..	1	2	3	1	...	...	20	23	39	28	67	375	374	...	749		
.	..	....	....	2	..	11	12	1	...	...	..	1	...	...	...	...	2	3	...	...	...	20	15	35	16	51	212	209	...	421		
39	5	12	10	49	8	104	184	43	2	1	..	6	..	5	2	10	28	43	8	2	...	333	273	564	325	889	3,981	3,990	17*	7,988		

* Classed with males.

TABLE No. XVI.

Recapitulation of the Causes of Death by Classes and Orders, by Counties, 1892.

CAUSES OF DEATH.	Rockingham.	Strafford.	Belknap.	Carroll.	Merrimack.	Hillsborough.	Cheshire.	Sullivan.	Grafton.	Coös.	Total for state.
All causes	1,026	864	440	342	1,064	2,092	608	382	749	421	7,988
Specified causes	959	808	423	315	1,012	1,836	568	369	706	386	7,382
Cause not stated or unclassified	67	56	17	27	52	256	40	13	43	35	606
CLASSES.											
I—Zymotic diseases	152	152	96	38	165	368	101	69	111	92	1,344
II—Constitutional diseases	187	131	61	56	160	282	86	48	97	59	1,167
III—Local diseases	446	375	193	180	484	830	282	210	371	160	3,531
IV—Developmental diseases	132	118	55	30	154	297	71	38	103	59	1,057
V—Violent deaths	42	32	18	11	49	59	28	4	24	16	283
ORDERS.											
I—1. Miasmatic diseases	147	145	90	37	153	348	97	65	108	89	1,279
2. Enthetic diseases	3	4	6	1	11	16	4	3	3	3	54
3. Dietic diseases	2	3	.....	.....	1	4	.....	1	.....	.....	11
4. Parasitic diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II—1. Diathetic diseases	48	40	25	15	47	88	25	18	37	21	364
2. Tubercular diseases	139	91	36	41	113	194	61	30	60	38	803

III—1. Diseases of nervous system	119	91	50	47	141	238	75	52	125	43	981
2. Diseases of organs of circulation	99	69	35	25	73	137	48	37	67	21	611
3. Diseases of respiratory organs	130	125	60	64	168	286	103	76	103	54	1,169
4. Diseases of digestive organs	47	57	28	25	60	93	35	20	43	24	432
5. Diseases of urinary organs	47	25	20	17	38	73	14	22	30	16	302
6. Diseases of generative organs	1	2	.....	2	.....	.....	3	1	.....	.....	9
7. Diseases of osseous and locomotory organs	1	2	.....	.....	2	2	1	1	1	2	12
8. Diseases of integumentary system	2	4	.....	.....	2	1	3	1	2	.....	15
IV—1. Developmental diseases of children	54	67	17	11	65	200	26	17	31	31	519
2. Developmental diseases of women	2	1	1	2	4	6	3	1	2	.....	22
3. Old age	69	45	30	13	72	66	41	18	62	25	441
4. Atrophy and debility	7	5	7	4	13	25	1	2	8	3	75
V—1. Accident and negligence	37	26	10	9	42	48	21	3	20	13	229
2. Homicide	1	.....	2	.....	.....	.....	.....	.....	.....	.....	3
3. Suicide	4	6	6	2	7	11	7	1	4	3	51

TABLE No. XVII.

Deaths by Ages, Sex, and Months, by Counties and Towns.

(Not including deaths with sex not stated. These are given in Table XX.)

TOWNS IN ROCKINGHAM COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Atkinson	Males	..	..	..	..	..	1	..	1	2	6	2	....	..	..	3	....	3	1	1	....	1	2	....	....	....	1	..	12	....
	Females	..	..	..	..	..	1	..	....	2	2	3	1	..	1	2	....	....	....	2	2	1	1	1	1	....	....	..	10	22
Auburn	Males	1	1	..	..	..	..	..	1	1	....	1	..	..	..	1	....	....	1	1	....	....	....	....	....	2	....	..	5	....
	Females	..	..	..	..	..	..	..	..	4	....	1	..	..	..	....	1	1	1	....	1	....	....	1	....	....	....	..	5	10
Brentwood	Males	..	..	..	..	2	..	..	3	3	5	2	....	..	1	2	1	1	1	....	....	2	1	....	4	....	4	..	16	....
	Females	..	3	..	..	2	2	2	....	3	1	....	....	..	1	3	....	....	1	2	1	2	3	....	1	1	....	..	14	30
Candia	Males	2	..	..	..	1	..	1	1	4	3	1	....	..	..	....	1	1	4	2	....	....	....	2	1	2	....	..	13	....
	Females	..	2	..	..	1	3	2	2	2	4	1	1	..	..	5	3	2	2	....	1	2	....	1	....	1	1	..	18	31
Chester	Males.	..	..	..	1	1	..	1	....	2	1	1	....	..	1	1	....	2	....	....	2	....	1	1	....	1	....	..	8	....
	Females	..	..	..	1	1	1	2	....	2	1	1	....	..	..	1	....	2	....	....	1	1	....	2	....	2	....	..	9	17
Danville	Males	..	..	..	..	..	..	..	....	1	2	3	....	..	..	....	1	....	1	1	1	....	....	....	1	1	....	..	6	....
	Females	..	..	..	..	..	..	..	....	....	1	1	2	..	..	....	1	....	....	....	....	1	....	1	....	....	1	..	4	10
Deerfield	Males	..	..	1	1	2	..	..	2	1	6	3	2	..	1	6	3	1	....	1	....	1	1	2	1	1	2	..	19	....
	Females	5	..	..	..	..	..	1	....	3	2	2	....	..	1	2	1	1	1	1	1	1	3	....	3	....	....	..	14	33
Derry	Males	10	2	1	2	..	3	2	....	2	7	....	....	....	..	3	3	5	1	2	2	3	3	2	....	2	3	..	29	....
	Females	1	1	..	..	1	..	..	6	2	1	5	....	....	..	5	4	1	1	....	1	....	....	2	....	1	2	..	17	46
East Kingston	Males	..	..	1	..	..	..	..	....	2	....	3	....	....	..	1	....	....	1	1	1	1	....	1	....	....	....	..	6	....
	Females	..	..	..	1	..	..	1	....	2	5	....	....	....	..	2	2	1	....	....	1	....	1	....	2	....	....	..	9	15
Epping	Males	6	..	1	2	2	2	..	2	....	8	1	....	....	..	4	3	1	2	2	1	....	1	4	....	4	2	..	24	....
	Females	8	1	..	1	4	1	1	1	3	3	1	....	....	..	3	3	2	....	3	3	....	3	3	....	1	3	..	24	48

Exeter	Males	17	1	..	4	1	2	3	2	4	7	2	....	..	..	5	3	....	4	3	1	9	7	....	2	2	6	1	43	....	
	Females	8	..	2	3	4	5	2	....	5	3	4	1	..	..	5	3	3	2	2	2	5	3	2	4	3	2	1	37	80	
Fremont	Males	2	2	..	..	..	..	1	2	2	1	....	....	..	..	....	3	2	....	1	....	....	....	1	1	1	1	..	10	....	
	Females	3	..	..	..	2	2	..	1	1	....	....	....	..	..	2	1	1	....	....	....	1	....	1	1	1	1	..	9	19	
Greenland	Males	1	..	1	..	..	..	..	....	1	....	1	....	..	..	1	....	....	....	....	1	....	....	....	1	1	....	..	4	....	
	Females	..	..	..	..	..	..	1	....	2	....	2	....	..	..	3	1	....	....	....	....	....	....	1	....	....	....	..	5	9	
Hampstead	Males	..	..	..	..	..	..	..	....	2	2	....	....	..	1	....	....	....	2	1	....	....	....	....	....	2	....	..	5	....	
	Females	..	..	1	..	..	1	1	....	1	2	1	....	..	1	4	....	1	1	....	....	....	....	....	1	....	....	..	7	12	
Hampton	Males	1	..	..	..	..	..	1	1	1	....	1	....	..	..	....	....	....	....	1	....	2	2	....	....	....	....	..	5	....	
	Females	1	..	..	1	..	..	..	....	1	1	2	....	..	..	1	....	....	....	1	1	....	1	....	2	....	....	..	6	11	
Hampton Falls	Males	..	..	..	1	..	1	..	....	2	....	2	....	..	..	2	....	....	....	....	1	....	1	1	1	....	....	..	6	....	
	Females	..	1	..	1	..	..	..	....	....	1	2	....	..	..	....	....	1	....	....	1	....	....	....	....	3	....	..	5	11	
Kensington	Males	1	..	..	..	..	..	..	....	3	....	1	....	..	..	1	....	....	....	2	1	....	1	....	....	....	....	..	5	....	
	Females	..	..	..	..	..	..	..	....	1	1	1	2	..	..	2	....	1	1	....	....	....	....	....	1	....	....	..	5	10	
Kingston	Males	2	..	..	..	..	..	..	....	....	2	2	....	..	..	....	2	....	1	2	....	....	....	....	1	....	....	..	6	....	
	Females	..	..	..	..	..	..	..	....	2	1	1	....	..	..	....	....	....	....	1	1	....	....	1	1	....	....	..	4	10	
Londonderry	Males	1	..	..	1	..	1	2	1	8	3	1	1	..	..	7	4	....	1	....	1	....	....	3	....	3	....	..	19	....	
	Females	1	..	1	2	2	..	1	2	....	1	2	1	..	..	4	1	1	1	1	....	2	....	1	1	1	....	..	13	32	
Newcastle	Males	..	..	..	..	..	1	..	2	1	....	....	....	..	..	3	....	....	....	1	....	....	....	....	....	....	....	..	4	....	
	Females	..	..	..	..	1	..	1	2	....	1	1	....	..	..	....	2	....	1	....	2	1	....	....	....	....	....	..	6	10	
Newington	Males	..	..	1	..	..	..	1	....	1	....	....	....	..	1	1	1	....	....	....	....	1	1	....	....	....	....	..	4	....	
	Females	..	..	..	..	..	..	..	....	....	2	1	....	..	..	2	....	....	1	....	....	....	....	....	....	....	....	..	3	7	
Newmarket	Males	9	2	1	2	2	1	1	3	5	3	2	....	..	1	7	1	3	1	1	1	4	4	2	2	3	3	..	32	....	
	Females	9	2	..	1	6	1	1	4	3	4	5	3	....	..	7	2	6	4	7	2	3	4	2	....	....	2	..	39	71	
Newton	Males	1	..	..	1	1	2	1	1	1	1	4	....	..	..	3	1	....	2	1	....	3	....	2	....	....	1	..	13	....	
	Females	..	2	..	..	1	3	..	....	3	....	2	1	..	..	1	....	1	1	1	1	1	....	3	....	2	1	..	12	25	
North Hampton	Males	1	..	..	..	..	1	..	....	1	....	....	....	..	..	....	....	....	....	....	1	1	....	1	....	....	....	..	3	....	
	Females	1	..	..	..	..	..	..	2	1	....	1	1	..	..	1	2	1	1	1	....	....	....	....	....	....	....	..	6	9	
Northwood	Males	..	..	..	1	3	1	..	1	2	3	1	....	..	..	....	1	....	....	1	....	3	....	1	4	....	2	..	12	....	
	Females	..	..	1	..	2	2	..	1	2	1	3	....	..	..	2	3	....	....	2	1	....	2	2	....	....	....	..	12	24	

TABLE No. XVII.—*Continued.*

TOWNS IN ROCKINGHAM COUNTY.—*Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Nottingham	Males	..	..	..	..	1	..	..	....	3	2	4	....	..	..	3	1	1	....	2	....	....	....	2	....	....	1	..	10	....
	Females	1	..	..	1	..	2	1	....	2	3	2	....	..	1	6	1	2	1	....	1	....	....	....	....	1	1	..	13	23
Plaistow	Males	1	2	..	..	..	..	..	2	2	....	....	....	..	..	3	1	1	....	....	1	....	1	....	....	....	....	..	7	....
	Females	2	..	..	..	..	..	..	....	....	1	1	....	..	..	....	1	....	....	1	....	1	1	....	....	....	....	..	4	11
Portsmouth	Males	18	5	3	5	13	10	9	10	12	12	8	....	..	1	12	6	8	12	5	11	7	10	8	11	7	9	..	106	....
	Females	15	4	2	6	8	6	7	8	17	17	13	1	..	..	14	8	15	7	7	5	8	7	7	10	13	3	..	104	210
Raymond	Males	1	1	1	..	1	1	1	1	2	....	2	....	..	..	3	3	1	2	....	....	....	1	....	....	1	....	..	11	....
	Females	..	1	..	..	2	..	..	1	2	2	2	....	..	..	1	1	....	2	1	....	1	1	1	....	2	....	..	10	21
Rye	Males	1	..	..	..	..	..	..	....	1	2	....	....	..	..	1	....	1	....	....	1	....	....	....	....	1	....	..	4	....
	Females	1	..	..	..	1	..	1	....	2	4	....	1	..	..	5	....	....	2	....	....	....	1	....	....	2	....	..	10	14
Salem	Males	3	2	2	..	..	2	3	2	4	6	6	....	..	..	9	2	3	1	1	3	3	1	2	2	2	1	..	30	....
	Females	1	..	..	..	..	1	2	2	2	3	....	1	..	..	3	1	....	1	1	....	....	1	1	1	....	3	..	12	42
Sandown	Males	1	..	..	..	1	..	..	....	....	....	1	....	..	..	....	....	....	....	....	....	1	....	....	1	....	1	..	3	....
	Females	..	1	..	..	..	..	..	....	2	1	....	....	..	..	....	....	2	....	....	....	....	....	1	....	....	1	..	4	7
Seabrook	Males	5	4	1	3	1	2	..	2	1	3	....	....	..	1	1	5	7	1	1	1	2	2	2	....	1	....	..	23	....
	Females	2	8	1	..	1	..	..	2	2	2	....	....	..	..	1	2	4	1	1	5	1	2	....	....	....	1	..	18	41
South Hampton	Males	..	..	..	..	..	..	..	1	1	1	1	....	..	..	1	....	....	....	1	....	....	1	....	....	....	1	..	4	....
	Females	1	..	..	..	..	..	2	....	....	2	....	....	..	..	2	2	....	....	1	....	....	....	....	....	....	....	..	5	9

South Newmarket	Males	..	..	..	1	1	2	1	1	1	....	1	....	..	..	....	....	3	2	....	1	....	....	1	....	....	1	..	8	....
	Females	1	..	..	..	1	1	..	....	1	2	3	1	..	..	4	....	....	1	1	1	2	....	1	....	....	....	..	10	18
Stratham	Males	..	..	..	..	1	..	1	....	....	4	....	1	..	..	1	1	....	1	....	....	....	1	....	....	3	....	..	7	....
	Females	..	..	1	1	1	..	..	2	3	....	2	....	..	..	1	1	1	1	....	1	....	....	2	....	1	2	..	10	17
Windham	Males	..	..	..	..	..	..	1	....	....	....	1	....	..	..	....	1	....	....	....	....	....	....	....	1	....	....	..	2	....
	Females	..	..	..	1	1	..	..	....	3	2	....	....	..	..	2	....	....	1	..	....	....	1	3	....	....	....	..	7	9
Males		85	22	14	25	34	33	30	42	79	90	58	4	..	8	85	48	44	42	35	32	44	42	38	34	40	39	1	524	....
Females		61	26	9	20	42	32	29	36	81	76	66	17	..	5	96	47	50	36	37	36	34	35	40	29	35	24	1	500	1024

TABLE No. XVII.—*Continued.*

TOWNS IN STRAFFORD COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Barrington	Males	1	1	..	..	1	1	1	1	4	4	2	....	..	..	2	....	1	2	3	2	....	....	3	....	1	2	..	16	....
	Females	1	3	1	..	..	1	..	1	1	3	7	1	1	1	7	2	2	2	1	1	1	....	1	....	2	1	1	21	37
Dover	Males	44	18	4	10	7	12	11	11	16	19	6	....	1	2	23	14	14	7	18	8	16	14	12	17	10	7	1	161	....
	Females	34	13	9	8	13	15	13	9	17	20	15	3	..	1	24	14	18	14	12	14	14	16	16	10	12	5	1	170	331
Durham	Males	..	..	..	..	1	..	..	2	3	6	2	....	..	..	4	....	....	1	1	....	2	3	....	....	1	2	..	14	....
	Females	2	..	..	..	1	..	1	1	3	2	3	....	..	..	5	....	1	1	3	....	2	....	....	....	....	1	..	13	27
Farmington	Males	2	1	..	1	..	..	5	2	4	5	3	....	..	1	3	....	3	2	1	4	2	1	4	2	1	1	..	24	....
	Females	6	1	..	2	2	2	2	4	6	8	6	....	..	..	6	5	3	4	5	2	4	4	2	1	1	2	..	39	63
Lee	Males	1	..	..	..	1	..	2	1	....	1	1	....	..	..	....	1	....	....	2	....	1	....	....	1	1	1	..	7	....
	Females	1	..	..	1	..	..	1	....	....	2	...	....	..	..	1	2	....	....	....	....	....	1	....	1	....	....	..	5	12
Madbury	Males	..	..	..	..	..	..	..	2	1	1	....	....	..	..	....	1	....	....	2	1	....	....	....	....	....	....	..	4	....
	Females	..	..	..	1	1	..	..	....	....	1	2	....	..	..	1	....	....	....	3	....	....	....	....	....	....	1	..	5	9
Middleton	Males	..	..	..	..	..	1	..	1	....	1	....	....	..	..	....	2	...	....	....	....	1	....	....	....	....	....	..	3	....
	Females	..	..	..	..	..	..	..	1	....	1	....	....	..	..	....	2	....	....	....	....	....	....	....	....	....	....	..	2	5
Milton	Males	2	1	..	..	..	..	1	1	1	2	3	....	..	1	....	....	2	4	....	1	....	2	1	1	....	1	..	12	....
	Females	..	..	..	..	..	1	1	1	....	4	2	....	..	1	1	....	....	1	2	....	....	....	....	....	3	2	1	10	22
New Durham	Males	1	..	..	..	1	1	1	1	1	....	....	....	..	..	1	1	....	1	1	....	....	....	....	2	....	....	..	6	....
	Females	2	..	..	..	1	..	..	....	....	1	3	1	..	..	....	2	....	1	....	....	....	....	1	1	2	1	..	8	14
Rochester	Males	13	4	3	2	6	3	6	4	5	13	3	....	..	..	8	3	5	4	6	5	5	7	5	3	9	2	..	62	....
	Females	10	8	1	3	9	9	9	4	7	6	5	1	..	..	13	6	12	11	5	5	2	6	4	2	1	5	..	72	134

Rollinsford	Males	6	4	1	..	1	1	1	3	4	....	....	1	..	1	1	2	....	1	2	1	....	2	1	6	5	2	..	23	....
	Females	4	5	2	2	1	2	..	....	4	....	4	....	..	..	....	3	2	4	....	2	1	2	4	1	4	1	..	24	47
Somersworth	Males	21	6	2	4	2	3	6	2	3	5	5	....	..	2	12	3	7	4	4	1	7	11	1	2	4	5	..	61	....
	Females	25	8	1	10	2	6	7	3	3	4	5	1	..	1	13	3	5	4	10	5	7	11	1	3	7	7	..	76	137
Strafford	Males	1	..	1	..	..	..	1	1	1	5	6	....	..	..	6	....	1	2	....	1	....	2	1	2	1	....	..	16	....
	Females	1	1	1	..	1	..	..	2	....	2	2	....	..	..	2	1	3	1	....	....	....	....	1	1	1	....	..	10	26
Males		92	35	11	17	20	22	35	32	43	62	31	1	1	7	60	27	33	28	40	24	34	42	28	36	33	23	1	409	....
Females		86	39	15	27	31	36	34	26	41	54	54	7	1	4	73	40	46	43	41	29	31	40	30	20	33	26	3	455	864

TABLE No. XVII.—*Continued.*

TOWNS IN BELKNAP COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alton	Males	..	..	..	1	1	..	1	4	4	4	5	....	..	..	4	4	1	1	2	1	2	....	3	....	2	....	..	20	....
	Females	1	..	1	..	..	..	..	4	3	1	2	1	..	..	1	1	2	....	2	1	2	2	1	1	....	....	..	13	33
Barnstead	Males	..	..	..	..	..	..	..	....	3	....	1	....	..	..	1	1	....	1	....	1	....	....	....	....	....	....	..	4	....
	Females	2	..	..	..	1	..	2	2	4	4	5	1	..	1	6	1	2	1	2	2	....	....	1	2	3	2	..	22	26
Belmont	Males	3	4	..	2	1	1	1	1	....	3	2	....	..	..	3	2	2	1	3	....	1	4	....	1	1	....	..	18	....
	Females	1	1	..	..	2	2	..	2	1	3	4	....	..	..	6	4	1	....	....	1	2	....	2	....	....	....	..	16	34
Centre Harbor	Males	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Females	..	..	..	..	..	..	1	1	1	1	3	1	..	..	....	1	....	1	1	....	....	1	....	....	2	2	..	8	8
Gilford	Males	9	4	..	2	1	..	1	....	4	6	3	1	..	2	4	3	1	2	3	3	1	6	1	2	4	3	..	33	....
	Females	8	2	1	1	3	1	2	4	4	1	5	1	..	2	3	5	3	2	3	4	6	2	2	2	2	....	1	35	68
Gilmanton	Males	..	..	..	..	..	..	1	4	1	4	5	....	..	1	5	2	3	2	....	....	....	1	....	1	1	1	..	16	....
	Females	1	..	..	1	1	..	1	....	2	6	4	1	..	1	6	4	3	....	....	2	....	2	1	....	....	....	..	18	34
Laconia	Males	18	6	3	3	4	6	2	4	6	8	4	....	..	1	10	8	6	5	8	3	7	4	6	1	4	3	..	65	....
	Females	10	11	1	5	1	4	6	6	8	8	4	....	..	..	13	6	4	8	5	12	2	1	4	3	4	2	..	64	129
Meredith	Males	1	1	..	..	1	..	1	3	2	5	....	....	..	3	2	....	1	....	....	3	2	3	1	2	3	....	..	17	....
	Females	1	..	..	2	1	3	1	1	1	2	....	....	..	3	1	1	2	2	....	1	1	2	4	1	....	....	..	15	32
New Hampton	Males	2	..	..	..	1	3	1	2	3	2	2	....	..	..	5	....	1	2	....	1	....	2	1	3	1	....	..	16	....
	Females	1	..	..	..	..	..	1	2	1	3	1	....	..	..	3	3	1	....	....	....	....	1	....	....	....	1	..	9	25

Sanbornton	Males	..	1	..	..	..	..	3	....	3	1	....	..	..	1	1	....	....	1	1	....	....	....	....	2	2	..	8	....
	Females	..	..	..	..	4	..	2	1	3	1	2	2	..	..	5	2	1	....	2	1	....	....	1	1	....	2	..	15	23
Tilton	Males	2	1	1	2	2	1	1	2	1	1	....	....	..	..	2	1	2	....	....	4	1	1	1	....	2	....	..	14	....
	Females	2	..	2	1	1	..	1	....	3	3	1	....	..	..	3	1	1	....	2	1	3	2	....	....	....	1	..	14	28
Males		35	17	4	10	11	11	9	23	24	36	23	1	..	7	37	22	17	14	17	17	14	21	13	10	20	9	..	211	....
Females		27	14	5	10	14	10	17	23	31	33	31	7	..	7	47	29	20	14	17	25	16	13	16	10	11	10	1	229	440

TABLE No. XVII.—*Continued.*

TOWNS IN CARROLL COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Albany	Males	..	..	..	..	..	..	1	....	....	....	....	....	..	..	....	1	....	....	....	....	....	....	....	....	....	....	..	1	....
	Females	..	..	..	..	..	..	2	....	....	....	....	....	..	..	1	....	....	....	1	....	....	....	....	....	....	....	..	2	3
Bartlett	Males	2	3	..	1	..	1	1	2	1	3	....	....	..	1	5	1	....	....	3	....	2	2	....	....	1	1	..	15	
	Females	..	2	..	2	..	..	..	1	....	....	2	....	..	..	3	1	1	....	1	....	....	1	....	....	....	....	..	7	22
Brookfield	Males	..	..	1	..	..	..	..	1	....	1	....	....	..	..	1	....	....	....	1	....	....	....	....	....	1	....	..	3	....
	Females	..	1	..	..	..	..	..	....	....	....	....	....	..	..	1	....	....	....	....	....	....	....	....	....	....	....	..	1	4
Chatham	Males	..	..	..	..	..	2	..	....	....	....	....	....	..	..	1	....	1	....	....	....	....	....	....	....	....	....	..	2	....
	Females	..	..	..	..	..	..	..	....	....	1	1	....	..	..	....	....	....	....	....	1	....	....	1	....	....	....	..	2	4
Conway	Males	5	3	1	1	..	1	1	3	5	1	1	....	..	..	3	2	2	2	1	1	1	3	....	3	1	3	..	22	....
	Females	4	1	..	..	4	2	1	3	6	3	1	2	..	..	5	2	2	2	1	3	1	3	1	4	2	1	..	27	49
Eaton	Males	..	..	..	..	..	1	1	....	1	....	....	....	..	..	....	....	....	2	....	1	....	....	....	....	....	....	..	3	....
	Females	..	..	..	..	..	..	..	....	....	1	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	....	..	1	4
Effingham	Males	..	..	..	1	1	..	1	....	....	3	....	....	..	1	1	1	1	....	....	1	1	....	....	....	2	....	..	7	....
	Females	1	..	..	..	..	1	..	2	3	1	1	....	..	..	2	....	2	....	1	3	....	....	....	1	....	....	..	9	16
Freedom	Males	..	..	..	..	1	..	..	1	....	2	....	....	..	3	....	....	....	....	2	....	2	....	1	....	....	2	..	7	....
	Females	..	..	..	..	..	..	1	1	....	1	....	....	..	2	....	....	1	....	1	....	3	....	....	....	....	....	..	5	12
Hart's Location	Males	3	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	2	..	3	....
	Females	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	3
Jackson	Males	1	..	..	..	..	..	..	....	2	1	....	....	..	..	1	....	....	....	1	....	....	1	....	....	....	....	1	4	....
	Females	..	..	..	..	1	..	..	1	1	1	....	....	..	..	2	....	....	....	1	....	....	....	....	....	....	1	..	4	8

Madison	Males	..	..	..	..	..	..	1	....	1	....	1	....	..	..	1	....	....	....	....	....	....	2	....	....	....	....	..	3	....
	Females	..	..	..	..	..	..	1	1	1	....	....	....	..	..	1	....	....	....	2	....	....	....	....	....	....	....	..	3	6
Moultonborough	Males	..	..	..	..	..	..	..	....	4	2	....	....	..	..	2	....	....	....	....	1	....	....	1	1	....	1	..	6	....
	Females	1	..	..	..	2	1	1	2	3	2	....	1	..	..	3	1	1	2	1	....	1	....	3	1	....	....	..	13	19
Ossipee	Males	1	1	..	1	1	1	3	3	3	5	1	....	..	1	6	1	2	2	1	1	1	3	2	....	2	....	..	21	....
	Females	1	..	..	1	2	1	1	1	4	3	1	....	..	..	1	....	....	3	1	1	2	....	1	2	3	1	..	15	36
Sandwich	Males	2	..	..	..	3	..	1	....	1	4	3	....	..	..	2	....	....	2	....	2	1	....	2	2	2	1	..	14	....
	Females	..	..	..	..	..	1	2	....	3	6	2	1	..	..	4	....	2	1	2	....	....	....	1	1	2	2	..	15	29
Tamworth	Males	..	..	..	..	..	..	1	1	2	1	1	....	..	..	3	....	....	1	1	....	....	....	....	1	....	....	..	6	....
	Females	..	..	..	..	2	..	2	1	2	1	4	....	..	..	2	1	....	....	2	2	1	1	2	....	....	1	..	12	18
Tuftonborough	Males	2	..	1	1	..	1	..	1	....	5	3	....	..	..	7	1	....	2	....	....	....	....	....	2	2	....	..	14	....
	Females	3	1	..	..	2	1	1	....	2	1	1	....	..	..	2	2	....	2	1	1	2	....	1	....	....	1	..	12	26
Wakefield	Males	3	2	..	..	4	1	..	1	5	5	4	....	..	..	2	2	1	4	1	2	1	2	7	....	1	2	..	25	....
	Females	1	..	..	..	1	..	1	1	1	2	2	....	..	..	2	....	1	2	....	....	1	....	1	....	1	1	..	9	34
Wolfeborough	Males	2	1	..	2	2	1	3	....	5	4	5	....	..	2	8	2	3	1	1	2	1	1	3	2	1	2	..	27	....
	Females	1	..	..	..	..	2	1	3	4	5	5	....	..	1	1	3	3	2	3	1	1	5	1	1	....	1	..	22	49
Males		21	10	3	7	12	9	14	13	30	37	19	....	..	8	43	11	10	19	9	11	10	14	16	11	14	14	1	183	....
Females		12	5	..	3	14	9	14	17	30	28	20	4	..	3	30	10	13	14	18	12	12	10	12	10	9	9	..	159	342

TABLE No. XVII.—*Continued.*

TOWNS IN MERRIMACK COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Allenstown	Males	3	5	2	..	..	..	..	....	1	....	....	....	..	..	....	....	....	1	1	....	....	3	3	3	....	....	..	11	....
	Females	4	3	..	2	2	..	..	3	1	1	....	....	..	..	....	2	1	....	....	1	3	1	4	2	....	1	1	16	27
Andover	Males	..	..	..	1	1	1	1	1	1	3	....	....	..	..	2	1	2	....	....	....	2	....	....	1	1	....	..	9	....
	Females	1	1	..	..	..	..	1	....	....	5	4	....	..	..	5	2	....	....	2	....	1	....	....	2	....	....	..	12	21
Boscawen	Males	3	1	..	1	1	2	..	1	3	5	4	....	..	1	4	3	....	....	2	..	....	4	....	....	7	2	..	22	....
	Females	1	1	..	..	2	2	3	2	2	1	1	1	..	1	5	2	3	3	....	....	....	1	1	1	1	....	..	17	39
Bow	Males	2	..	..	..	..	..	..	1	....	2	2	....	1	..	4	1	....	2	1	....	....	....	....	....	....	....	..	8	....
	Females	1	1	1	..	3	..	..	....	2	1	1	....	..	1	....	1	1	....	2	1	....	4	....	1	1	....	..	11	19
Bradford	Males	..	..	..	..	..	..	..	1	1	2	1	....	..	..	2	....	....	....	....	....	....	....	....	1	....	2	..	5	....
	Females	1	..	1	..	1	..	3	....	2	....	3	....	..	..	3	1	....	....	2	1	....	1	2	....	1	....	..	11	16
Canterbury	Males	1	..	..	..	..	1	1	1	3	3	1	....	..	..	3	2	1	1	....	....	1	....	1	1	1	....	..	11	...
	Females	..	1	1	..	1	2	2	1	2	3	1	....	..	..	5	....	....	1	....	3	....	3	1	....	....	1	..	14	25
Chichester	Males	..	..	..	..	1	..	1	1	....	1	....	....	..	1	1	1	1	1	....	....	1	....	....	....	....	....	..	5	....
	Females	..	..	..	..	1	..	1	...	1	....	1	....	..	1	2	....	....	2	....	....	....	....	1	....	....	....	..	5	10
Concord	Males	46	8	3	10	15	17	20	22	35	33	15	3	..	..	39	22	18	12	24	7	19	26	10	16	16	18	..	227	....
	Females	30	15	4	1	12	11	8	26	27	33	17	3	..	1	35	12	18	16	15	8	11	15	21	16	9	12	..	188	415
Danbury	Males	1	..	..	1	1	..	..	....	....	2	1	1	..	..	....	1	1	1	....	....	....	....	1	2	1	....	..	7	....
	Females	..	..	..	1	1	..	1	....	....	1	....	2	..	..	3	....	....	1	1	....	....	1	....	....	....	....	..	6	13
Dunbarton	Males	1	..	..	..	..	..	..	....	2	2	2	....	..	..	1	....	....	1	2	....	....	1	1	1	....	....	..	7	....
	Females	..	1	1	..	..	..	..	....	....	1	1	2	..	..	1	....	....	....	....	1	1	1	..	1	....	1	..	6	13

Epsom	Males	..	..	..	..	..	1	..	1	2	2	1	....	..	..	....	....	....	....	....	....	....	4	1	....	1	1	..	7	....
	Females	..	..	..	..	..	..	3	2	1	2	....	....	..	..	2	1	2	....	....	....	....	1	....	1	1	....	..	8	15
Franklin	Males	9	4	2	1	6	1	3	1	2	1	3	....	..	1	4	3	5	3	1	6	3	4	....	1	1	3	..	34	....
	Females	8	2	..	2	4	4	3	5	6	7	2	....	..	..	13	1	4	3	....	3	5	4	2	2	4	2	..	43	77
Henniker	Males	2	..	..	2	..	3	1	....	2	2	2	1	..	..	3	1	1	2	2	....	1	1	1	1	1	1	..	15	....
	Females	..	..	..	1	..	5	..	2	....	1	1	2	..	..	5	....	2	....	1	1	....	2	....	....	....	1	..	12	27
Hill	Males	1	..	..	1	..	2	1	....	1	2	1	....	..	..	3	1	....	3	....	....	....	....	....	1	1	....	..	9	....
	Females	..	2	..	..	..	1	..	....	1	....	1	....	..	..	1	1	....	....	....	....	....	....	1	....	2	....	..	5	14
Hooksett	Males	7	2	1	..	..	..	1	1	1	....	1	....	..	..	2	1	....	2	2	1	1	2	2	....	1	....	..	14	....
	Females	5	3	..	2	1	..	..	1	3	1	3	....	..	1	7	2	1	1	1	....	2	3	....	2	1	....	..	20	34
Hopkinton	Males	1	..	..	..	2	..	..	4	2	5	6	4	..	1	5	2	1	8	2	1	3	1	1	....	1	....	..	25	....
	Females	2	1	..	2	1	2	1	2	3	3	6	1	..	1	3	2	2	1	2	....	3	2	1	1	4	4	..	25	50
Loudon	Males	1	..	..	..	..	..	..	1	1	....	1	....	..	..	....	....	....	....	....	1	....	1	2	....	....	....	..	4	....
	Females	1	..	..	..	1	..	1	1	....	2	....	....	..	..	1	....	1	....	....	....	....	1	1	2	....	....	..	6	10
Newbury	Males	..	..	..	1	..	..	..	1	2	....	....	....	..	..	....	....	1	....	....	....	....	....	....	....	2	1	..	4	....
	Females	..	..	..	..	..	..	2	1	....	2	1	....	..	..	2	....	....	....	1	1	....	....	....	....	1	1	..	6	10
New London	Males	..	..	..	..	..	..	..	..	....	1	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	....	..	1	....
	Females	..	..	..	..	..	..	..	..	....	2	1	....	..	..	1	....	....	....	....	....	....	....	....	....	....	2	..	3	4
Northfield	Males	1	2	1	..	1	..	..	....	5	1	1	....	..	..	2	....	....	....	1	2	1	....	2	1	....	2	1	12	....
	Females	1	..	1	1	1	2	1	....	....	1	2	1	....	..	1	2	1	1	....	1	....	1	1	....	3	....	..	11	23
Pembroke	Males	8	2	2	2	2	2	..	1	....	4	1	1	..	6	8	1	2	3	1	1	3	1	2	4	3	2	..	31	...
	Females	8	1	1	5	1	1	2	4	3	2	2	2	..	3	11	....	3	4	1	....	3	2	5	2	2	2	..	35	66
Pittsfield	Males	4	..	..	..	3	..	3	....	3	2	2	....	..	..	2	1	....	2	1	....	2	2	1	4	1	1	..	17	....
	Females	3	2	..	..	2	2	2	4	1	6	5	2	..	1	8	2	1	3	3	....	2	1	3	4	....	3	..	30	47
Salisbury	Males	1	..	..	..	1	..	1	2	....	2	....	....	..	..	4	....	....	....	....	....	....	....	1	1	....	....	..	7	....
	Females	..	..	1	..	..	..	1	....	....	2	1	1	..	..	1	....	....	1	....	..	1	2	....	1	....	....	..	6	13
Sutton	Males	..	..	..	..	1	..	1	....	2	....	3	....	..	..	1	....	....	2	1	....	....	....	2	....	1	....	..	7	....
	Females	2	..	..	1	..	1	..	2	....	3	1	....	..	..	6	....	....	3	....	1	....	....	....	....	....	....	..	10	17
Warner	Males	..	2	..	..	2	..	..	....	3	1	4	....	..	..	1	1	1	2	....	1	2	1	1	....	2	....	..	12	....
	Females	..	1	2	1	1	..	1	1	2	4	3	1	..	..	1	3	1	....	1	2	3	1	1	1	1	2	..	17	29

TOWNS IN MERRIMACK COUNTY.—*Continued.*	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Webster																													
Males		1					1		2	1	2				3				1									5	
Females								1	2	3					3	1				1		1						7	12
Wilmot																													
Males				1				1	1	5					3	1		2			1	1	1	1				8	
Females								4			3				2	1						1		1				7	15
Males								41	76	81	54	10	1	10	97	44	34	46	42	20	40	52	33	39	43	33	1	524	
Females	92	26	11	21	37	30	34	61	61	86	60	18		10	127	36	41	42	32	25	35	47	47	40	32	32	1	537	1061
	69	35	13	19	35	33	37																						

TABLE No. XVII.—*Continued.*

TOWNS IN HILLSBOROUGH COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Amherst	Males	2	..	..	..	..	1	..	1	4	4	3	..	..	..	2	1	....	....	1	1	1	1	1	2	....	4	1	15	....
	Females	....	..	..	..	..	..	1	....	1	1	1	..	..	..	....	....	1	....	....	....	....	1	1	....	....	1	..	4	19
Antrim	Males	2	2	1	..	2	..	..	1	3	3	1	..	..	..	3	2	2	1	....	2	....	1	1	2	....	1	..	15	....
	Females	1	1	..	..	..	..	2	1	1	4	4	..	..	..	7	1	....	1	....	1	1	1	1	....	....	1	..	14	29
Bedford	Males	5	..	..	2	..	..	1	2	1	3	1	1	..	1	1	1	1	2	....	1	2	3	1	1	2	2	..	17	....
	Females	1	..	1	..	2	..	..	1	....	2	1	..	..	..	....	2	1	1	....	1	1	....	....	....	....	1	..	8	25
Bennington	Males	....	..	..	..	..	..	..	1	....	....	2	..	..	..	2	1	....	....	....	....	....	....	....	....	....	....	..	3	....
	Females	3	..	1	..	1	..	1	....	1	1	1	..	..	..	3	....	2	....	....	....	....	1	1	2	....	....	..	9	12
Brookline	Males	....	..	..	..	..	..	..	....	....	3	1	..	..	1	1	....	1	....	....	....	1	....	....	....	....	2	..	5	....
	Females	....	..	..	1	1	..	..	....	1	2	...	..	..	..	....	....	....	1	....	....	....	1	2	1	....	....	..	5	10
Deering	Males	1	..	..	..	2	..	..	1	1	3	1	..	..	..	1	1	....	....	....	1	1	....	....	2	1	2	..	9	....
	Females	....	..	..	..	..	..	..	1	....	....	2	1	..	..	....	....	....	1	....	1	....	....	1	....	....	1	..	4	13
Francestown	Males	1	..	..	..	..	..	1	1	....	3	1	..	..	..	....	1	1	1	2	....	....	....	....	....	....	1	1	7	....
	Females	1	..	..	..	..	..	1	....	1	....	3	..	..	..	....	....	1	1	2	....	1	....	....	....	....	1	....	6	13
Goffstown	Males	3	..	..	..	..	1	..	1	5	4	8	..	..	..	3	1	2	....	3	2	1	3	2	2	2	1	..	22	....
	Females	1	1	..	2	..	2	2	1	2	1	1	..	..	..	2	....	1	....	....	4	1	....	2	....	1	2	..	13	35
Greenfield	Males	1	..	..	..	..	..	..	....	....	1	1	..	..	..	....	....	1	....	....	....	1	....	....	1	....	....	..	3	....
	Females	1	..	..	..	..	1	2	....	....	1	....	1	..	..	....	....	1	1	1	1	....	....	1	....	....	1	..	6	9
Greenville	Males	8	3	1	2	1	..	1	....	1	....	....	..	..	1	2	1	1	2	2	....	3	1	....	....	4	2	..	18	....
	Females	6	3	2	3	..	1	..	....	2	2	3	..	..	..	2	2	1	6	2	....	1	1	2	2	1	2	..	22	40

TOWNS IN HILLSBOROUGH COUNTY.—*Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Hancock	Males	1	..	1	..	..	..	..	....	2	1	1	..	..	..	1	2	....	....	....	....	1	....	1	....	1	....	..	6	....
	Females	....	..	..	1	..	2	..	....	....	1	....	..	..	..	....	1	....	....	1	....	....	1	....	....	....	1	..	4	10
Hillsborough	Males	2	2	..	1	2	3	1	5	2	1	2	1	1	..	5	1	2	3	1	1	1	1	2	4	1	1	..	23	....
	Females	2	1	1	..	1	2	1	2	3	6	3	..	..	..	3	2	3	1	2	....	1	3	1	1	3	2	..	22	45
Hollis	Males	2	..	..	1	..	1	..	....	2	3	3	..	..	..	....	1	3	2	1	....	2	3	....	....	....	....	..	12	....
	Females	....	..	..	1	..	1	1	....	1	2	1	1	..	..	2	1	1	....	....	....	....	....	....	3	....	1	..	8	20
Hudson	Males	....	..	..	..	..	..	..	2	3	5	2	..	..	..	3	3	....	1	....	1	2	1	1	....	....	....	..	12	....
	Females	4	..	1	..	..	..	..	....	2	3	1	..	..	..	4	1	2	....	....	....	1	2	....	....	1	....	..	11	23
Litchfield	Males	....	..	..	..	..	..	..	....	1	....	....	..	..	..	....	....	....	....	....	....	....	....	....	1	....	....	..	1	....
	Females	1	..	..	..	..	..	1	....	....	1	....	..	..	..	1	1	....	....	....	....	....	1	....	....	....	....	..	3	4
Lyndeborough	Males	2	..	..	1	1	..	..	....	2	1	1	..	..	..	2	....	....	1	1	1	....	....	1	1	. .	1	..	8	....
	Females	1	..	..	1	1	..	1	1	....	3	1	..	..	..	1	....	....	2	1	....	2	1	....	1	1	....	..	9	17
Manchester	Males	204	57	9	16	28	32	24	36	37	35	9	..	..	14	60	41	43	36	36	37	71	49	37	34	26	30	1	501	*
	Females	167	50	8	25	44	49	40	52	41	24	15	2	..	8	68	36	33	34	32	39	79	51	42	40	41	30	..	525	1026
Mason	Males	....	..	1	..	..	..	1	1	1	1	1	..	..	..	1	1	....	1	....	....	....	1	....	1	1	....	..	6	....
	Females	....	2	..	..	..	..	..	....	....	1	1	1	..	..	....	2	1	....	....	....	....	2	....	....	....	....	..	5	11
Merrimack	Males	2	..	..	1	1	..	..	....	3	....	2	1	..	..	2	1	....	1	1	....	....	1	....	....	2	2	..	10	....
	Females	....	..	..	..	..	1	..	1	1	3	5	1	..	..	3	1	1	1	....	1	....	1	1	....	1	2	..	12	22
Milford	Males	4	..	..	1	3	2	..	1	3	6	6	1	..	..	6	5	2	1	2	2	1	1	2	2	2	1	..	27	....
	Females	3	1	..	1	..	2	1	4	5	10	4	1	..	1	5	....	4	3	2	3	5	....	4	3	2	2	..	33	60
Mont Vernon	Males	....	..	..	..	..	..	..	....	1	....	....	..	..	..	....	....	....	1	....	....	....	....	....	....	....	....	..	1	....
	Females	....	..	..	..	..	..	..	....	1	....	2	..	..	..	....	....	....	....	1	1	1	....	....	....	....	....	..	3	4

Nashua	Males	73	12	2	5	14	13	14	12	20	23	8	..	..	3	29	25	16	17	11	12	22	23	11	11	10	11	1	199	....
	Females	58	19	3	9	16	12	15	13	24	14	13	3	..	4	28	25	10	17	18	12	21	22	10	16	13	11	..	203	402
New Boston	Males	2	1	1	..	..	..	..	1	2	3	3	..	..	..	2	....	3	....	....	1	....	3	1	1	1	1	..	13	....
	Females	....	..	1	..	..	1	1	4	1	1	2	..	..	..	1	....	2	....	....	....	1	1	1	2	1	2	..	11	24
New Ipswich	Males	1	..	..	..	..	1	..	....	....	4	1	..	..	..	3	....	....	1	....	....	1	1	....	1	....	....	..	7	....
	Females	2	..	..	..	..	2	..	1	2	5	4	1	..	..	3	2	2	....	2	2	....	3	1	2	....	....	..	17	24
Pelham	Males	....	..	..	..	..	..	1	1	....	2	4	..	..	..	1	....	....	2	1	....	2	1	....	....	....	1	..	8	....
	Females	....	..	..	..	1	..	1	3	3	5	3	..	..	..	6	1	4	....	....	....	1	....	....	1	1	2	..	16	24
Peterborough	Males	6	..	..	1	3	1	1	2	4	8	3	.	..	..	7	2	2	1	1	....	4	3	1	2	3	3	..	29	....
	Females	3	1	..	1	1	..	..	2	1	5	2	1	..	..	5	...	4	1	2	1	1	....	2	1	....	....	..	17	46
Sharon	Males	....	..	..	..	..	..	..	..	....	....	....	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....
	Females	....	..	..	..	..	..	..	..	....	1	....	..	..	..	....	....	....	....	....	....	....	....	....	1	....	....	..	1	1
Temple	Males	....	..	..	..	..	..	..	..	1	3	....	..	..	..	1	....	....	....	....	....	....	....	....	1	....	2	..	4	....
	Females	....	..	..	1	..	..	..	..	....	....	1	..	..	..	....	....	....	....	1	....	1	....	....	....	....	....	..	2	6
Weare	Males	1	1	..	..	..	1	1	....	3	1	4	1	..	..	5	1	1	1	....	....	1	....	2	1	....	1	..	13	....
	Females	1	..	1	..	3	1	1	4	2	1	2	1	..	..	3	1	3	....	1	1	1	1	2	2	1	1	..	17	30
Wilton	Males	3	2	1	2	1	3	1	2	9	5	9	1	..	1	10	2	4	1	3	2	1	4	2	2	4	5	..	40	....
	Females	2	2	1	1	1	5	2	6	3	7	3	1	..	..	7	2	....	3	4	1	3	1	1	3	4	5	..	34	74
Windsor	Males	....	..	..	1	..	1	..	....	....	....	....	..	..	..	....	....	....	....	....	....	....	....	....	1	....	1	..	2	....
	Females	....	..	..	..	..	..	..	....	....	....	....	..	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	2
Males		326	80	17	34	58	60	47	71	111	126	78	6	1	21	153	94	85	76	66	64	119	101	66	73	61	75	3	1036	....
Females		258	81	20	47	72	82	74	97	99	107	79	15	..	13	154	81	78	74	73	68	123	96	76	81	72	68	..	1044	2080

*12 sex unknown.

TABLE No. XVII.—*Continued.*

TOWNS IN CHESHIRE COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alstead	Males	..	..	..	..	..	..	1	2	3	4	1	....	..	..	....	4	2	....	1	....	1	1	1	1	....	....	..	11	....
	Females	..	..	..	..	..	1	..	1	1	3	....	1	..	..	....	2	1	1	1	....	....	....	1	....	....	1	..	7	18
Chesterfield	Males	..	..	1	..	..	..	..	1	4	....	1	....	..	..	1	1	....	2	....	1	....	....	....	....	....	2	..	7	....
	Females	2	..	1	..	..	..	..	2	....	1	1	....	..	..	2	2	....	....	....	1	....	....	1	....	1	....	..	7	14
Dublin	Males	2	..	..	..	..	..	..	....	2	1	2	....	..	..	2	....	....	3	....	....	....	....	1	1	....	....	..	7	....
	Females	..	..	..	..	..	..	..	....	2	....	....	1	..	..	1	....	....	1	....	....	....	1	....	....	....	....	..	3	10
Fitzwilliam	Males	2	2	..	..	..	..	..	....	2	4	....	....	..	..	4	....	....	2	....	1	1	....	1	....	1	....	..	10	....
	Females	..	1	..	1	..	1	..	1	1	3	7	1	..	..	6	2	1	....	1	1	....	2	....	2	....	1	..	16	26
Gilsum	Males	1	..	..	..	1	..	..	....	....	3	....	....	..	..	....	2	....	....	1	....	....	1	1	....	....	....	..	5	....
	Females	..	..	..	..	1	..	..	....	....	1	1	....	..	..	....	1	....	....	1	....	....	1	....	....	....	....	..	3	8
Harrisville	Males	..	..	..	..	..	..	1	....	....	....	....	1	..	..	1	....	....	....	....	....	1	....	....	....	....	....	..	2	....
	Females	1	..	..	..	..	1	1	3	1	1	....	....	..	..	2	1	1	...	....	1	....	....	1	....	1	1	..	8	10
Hinsdale	Males	6	..	..	1	..	..	1	2	....	5	2	....	..	..	2	1	2	2	....	2	1	3	....	....	2	2	..	17	....
	Females	3	1	1	1	2	..	3	1	2	4	4	....	..	..	2	3	4	2	3	....	1	2	1	....	1	3	..	22	39
Jaffrey	Males	4	1	..	..	..	..	..	....	1	3	....	....	..	..	....	1	1	....	1	....	4	1	....	....	....	....	..	9	....
	Females	2	..	..	..	2	..	1	3	4	2	3	....	..	..	2	2	4	2	1	1	1	....	....	1	3	....	..	17	26
Keene	Males	19	3	3	4	4	10	6	7	10	10	3	1	..	..	16	6	12	5	7	8	6	4	3	5	3	5	..	80	....
	Females	10	5	1	2	4	6	8	7	2	7	5	1	..	..	10	4	4	5	9	3	4	5	5	4	4	1	..	58	138
Marlborough	Males	4	5	..	1	1	..	..	....	1	2	2	1	..	..	1	4	1	1	1	2	....	3	3	....	1	....	..	17	....
	Females	4	3	..	..	1	..	..	....	2	3	3	....	..	..	1	1	3	1	1	2	....	....	....	4	2	1	..	16	33

Marlow	Males	1	1	..	..	..	1	..	....	2	2	1	1	..	..	2	1	1	1	....	1	....	....	1	2	....	....	..	9	....	
	Females	3	..	..	..	..	1	1	1	....	....	2	....	..	..	....	....	1	1	....	....	1	....	2	1	....	2	..	8	17	
Nelson	Males	..	..	..	..	1	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	1	....	....	....	....	..	1	....	
	Females	..	..	..	..	..	..	..	....	....	1	....	....	..	..	....	1	....	....	....	....	....	....	....	....	....	....	..	1	2	
Richmond	Males	1	1	1	..	..	1	..	....	3	2	....	....	..	..	1	1	1	2	....	1	1	1	1	....	....	....	..	9	....	
	Females	..	..	..	..	..	2	..	....	....	....	2	1	..	..	2	1	....	....	....	....	1	1	....	....	....	....	..	5	14	
Rindge	Males	2	..	..	..	..	1	1	2	3	2	2	....	..	..	1	5	2	....	....	....	....	2	2	....	1	....	..	13	....	
	Females	1	..	2	2	..	..	..	....	2	....	....	....	..	..	1	3	1	....	....	....	....	1	1	....	....	....	..	7	20	
Roxbury	Males	..	..	..	..	..	..	..	....	....	....	2	....	..	1	1	1	....	....	....	....	....	....	1	....	....	....	..	3	....	
	Females	1	..	..	1	..	..	..	....	....	....	....	....	..	1	....	1	1	1	....	....	....	....	....	....	....	....	..	3	6	
Stoddard	Males	1	..	1	..	..	..	2	....	....	1	....	1	..	..	....	1	....	....	2	2	....	....	....	....	....	1	..	6	....	
	Females	..	..	..	..	..	1	..	....	....	2	2	....	..	..	....	1	....	....	1	....	1	....	1	1	....	....	..	5	11	
Sullivan	Males	..	..	..	..	..	..	..	....	....	....	1	....	..	..	....	1	....	....	....	....	....	....	....	....	....	....	..	1	....	
	Females	..	..	..	1	..	..	..	....	....	....	2	....	..	..	....	1	....	....	1	1	....	....	....	....	....	....	..	3	4	
Surry	Males	1	..	..	..	..	..	..	....	....	....	1	1	..	..	....	....	....	....	....	....	1	1	1	....	....	....	..	3	....	
	Females	..	..	..	..	1	..	..	....	2	....	....	....	..	..	1	....	....	....	....	....	....	....	1	....	....	1	..	3	6	
Swanzey	Males	4	1	1	1	1	1	1	1	1	5	2	....	..	..	3	3	6	1	1	1	1	1	....	....	1	1	..	19	....	
	Females	1	2	..	1	3	1	1	2	4	2	3	...	..	..	3	2	2	2	....	....	1	1	2	2	5	....	..	20	39	
Troy	Males	4	1	..	..	..	1	..	2	2	3	....	....	..	1	1	2	2	2	....	2	....	....	4	1	....	....	..	14	....	
	Females	2	1	2	..	1	2	1	....	2	3	1	2	..	..	1	1	3	....	....	....	....	3	2	3	2	2	..	17	31	
Walpole	Males	8	2	..	..	3	1	1	1	10	5	4	....	..	3	5	5	7	1	2	4	5	2	4	....	2	1	..	38	....	
	Females	5	1	..	..	2	..	..	3	6	4	5	....	..	..	6	1	....	2	1	....	3	3	3	3	3	1	..	26	64	
Westmoreland	Males	..	..	..	..	1	1	1	1	1	2	2	....	..	2	5	....	....	2	1	1	....	....	1	1	....	....	..	11	....	
	Females	..	..	1	..	2	1	..	1	3	6	3	2	..	..	9	2	2	2	1	1	....	1	....	1	....	....	..	19	30	
Winchester	Males	1	2	..	1	4	..	..	3	3	2	3	....	..	2	....	2	3	3	3	1	2	3	2	....	....	2	..	21	....	
	Females	1	3	1	1	1	2	..	2	2	4	3	....	..	1	2	2	3	4	3	2	....	....	....	2	2	....	..	21	42	
Males		61	19	7	8	16	17	15	22	48	56	29	6	..	9	46	41	40	27	20	27	24	24	27	11	12	14	..	313	....	
Females		36	17	9	10	20	19	16	27	36	47	47	9	..	2	51	34	31	24	24	13	13	21	21	24	24	14	..	295	608	

TABLE No. XVII.—*Continued.*

TOWNS IN SULLIVAN COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Acworth	Males	..	1	..	..	..	..	..	1	3	2	2	....	..	..	1	3	....	2	....	....	....	2	....	....	1	....	..	9	....
	Females	..	..	..	..	..	..	1	....	2	1	1	1	..	..	1	....	1	1	....	....	....	....	2	....	1	....	..	6	15
Charlestown	Males	1	..	..	..	..	..	2	1	1	5	4	2	..	..	1	4	1	1	2	....	4	1	1	....	1	....	..	16	....
	Females	2	..	..	..	2	1	..	1	3	7	2	....	..	..	6	3	1	....	....	....	1	2	1	2	2	....	..	18	34
Claremont	Males	14	..	1	1	1	1	1	4	6	13	13	1	..	..	10	4	4	5	2	1	10	9	1	5	1	4	..	56	....
	Females	8	3	..	1	5	2	4	4	5	7	8	....	..	..	13	4	3	5	4	3	2	5	3	3	....	2	..	47	103
Cornish	Males	2	..	..	..	1	1	1	1	....	1	3	....	..	..	5	1	1	1	....	1	....	....	1	....	....	....	..	10	....
	Females	..	..	..	..	..	1	3	1	2	3	1	....	..	1	8	....	1	....	1	....	....	....	1	....	1	....	..	12	22
Croydon	Males	1	1	..	..	..	..	..	....	1	2	....	....	..	..	1	....	....	1	1	....	....	....	....	....	2	....	..	5	....
	Females	2	..	..	..	..	..	1	....	1	....	2	....	..	..	1	....	1	1	....	....	....	....	1	....	....	2	..	6	11
Goshen	Males	..	..	..	..	..	..	1	....	1	1	....	....	..	..	1	....	....	....	....	1	....	....	....	....	....	1	..	3	....
	Females	..	..	..	2	..	1	..	....	....	1	....	1	..	..	1	....	....	3	....	....	....	....	....	....	....	1	..	5	8
Grantham	Males	3	..	..	..	..	..	..	2	....	....	4	....	..	1	2	3	1	....	....	....	3	1	....	....	....	....	..	10	....
	Females	1	..	..	..	..	..	..	2	....	1	2	....	..	..	3	....	....	2	....	....	....	....	1	....	....	....	..	6	16
Langdon	Males	..	..	..	1	..	..	..	....	1	1	....	....	..	..	....	....	....	....	1	....	....	1	....	....	....	1	..	3	....
	Females	..	..	1	..	..	..	..	....	....	1	1	....	..	..	....	....	....	1	....	1	....	....	....	....	1	....	..	3	6
Lempster	Males	2	..	..	..	..	..	..	....	....	2	2	....	..	..	2	1	....	....	....	....	....	....	1	1	1	....	..	6	....
	Females	..	..	..	..	..	..	..	....	1	2	....	....	..	..	....	....	....	....	....	1	....	....	1	....	1	....	..	3	9
Newport	Males	8	2	..	2	1	1	3	....	8	5	3	....	..	2	5	4	3	2	6	2	2	2	2	3	4	....	..	35	....
	Females	3	2	2	1	3	5	4	3	5	6	9	2	..	..	8	6	....	2	6	1	4	7	8	3	....	....	..	45	80

Plainfield	Males	..	..	1	..	..	..	1	1	1	1	2	....	..	..	4	....	....	....	....	....	....	1	....	....	2	..	7	....
	Females	..	1	..	..	..	..	1	3	....	1	1	....	..	..	1	....	....	....	....	1	2	....	....	....	1	2	..	7	14
Springfield	Males	..	..	..	..	..	..	2	2	3	2	1	...	..	..	2	1	1	....	1	1	....	1	....	....	1	1	1	10	....
	Females	..	..	..	..	..	2	..	1	3	....	1	....	..	..	2	1	1	....	....	1	....	....	1	1	....	....	..	7	17
Sunapee	Males	..	..	..	..	1	..	..	1	2	3	....	1	..	..	3	1	....	2	....	....	....	....	1	1	....	....	..	8	....
	Females	..	..	..	..	..	..	..	....	3	4	....	....	..	..	1	2	1	2	....	....	....	1	....	....	....	....	..	7	15
Unity	Males	..	..	..	..	2	..	..	1	1	2	2	1	..	..	1	....	1	1	....	1	....	1	2	....	2	....	..	9	....
	Females	..	..	..	..	..	..	..	....	2	4	3	1	..	..	1	2	....	4	....	....	2	....	....	1	....	....	..	10	19
Washington	Males	..	..	..	..	..	..	..	1	1	2	2	1	..	..	3	....	....	1	1	....	....	....	1	....	1	....	..	7	....
	Females	..	1	1	..	..	..	..	1	....	1	2	....	..	..	2	....	....	2	....	1	....	....	....	....	....	1	..	6	13
Males		31	4	2	4	6	3	11	15	29	42	38	6	..	3	41	22	12	16	14	7	19	18	11	10	14	9	1	194	....
Females		16	7	4	4	10	12	14	16	27	39	33	5	..	1	48	18	9	23	11	9	11	15	19	10	7	8	..	188	382

TABLE No. XVII.—*Continued.*

TOWNS IN GRAFTON COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Alexandria	Males	..	..	..	..	..	..	1	....	....	4	1	....	..	1	1	....	1	2	1	....	1	....	....	....	....	1	..	7	....
	Females	..	..	..	..	1	..	..	1	1	6	4	....	..	1	4	....	....	2	1	....	....	1	2	1	2	1	..	14	21
Ashland	Males	2	3	..	1	1	..	..	1	2	2	1	....	..	1	3	....	1	....	1	1	....	....	1	2	5	....	..	14	....
	Females	2	1	..	..	2	..	1	1	1	3	2	....	..	..	1	1	....	2	3	1	....	1	1	1	1	1	..	13	27
Bath	Males	..	..	..	..	1	..	..	1	1	....	....	....	..	..	....	....	1	....	1	....	....	1	....	....	....	....	..	3	....
	Females	..	..	..	..	1	1	..	....	1	....	1	1	..	..	2	1	1	....	....	....	....	....	....	1	....	....	..	5	8
Benton	Males	..	1	..	1	..	..	1	....	....	....	....	....	..	..	....	....	1	1	....	....	....	....	....	....	1	....	..	3	....
	Females	..	..	..	..	..	1	..	1	1	1	....	....	..	..	....	....	....	1	....	1	....	1	....	....	1	....	..	4	7
Bethlehem	Males	3	..	..	1	..	..	..	1	1	....	....	....	..	1	....	....	....	....	1	....	3	2	....	1	....	....	..	7	....
	Females	2	..	..	..	1	..	..	1	1	....	1	....	..	..	....	....	....	....	....	....	1	....	2	....	2	1	..	6	13
Bridgewater	Males	..	1	..	..	..	..	..	1	2	4	1	....	..	..	2	....	....	2	....	....	....	2	....	....	....	3	..	9	....
	Females	1	..	..	..	..	1	..	....	1	....	....	....	..	..	....	....	....	....	....	1	....	....	....	....	1	1	..	3	12
Bristol	Males	5	1	..	..	1	1	..	3	1	3	3	....	..	..	4	8	2	....	....	1	2	....	....	1	....	....	..	18	....
	Females	..	..	1	..	2	..	..	1	1	3	1	....	..	1	7	1	....	....	....	....	....	1	....	....	....	1	..	10	28
Campton	Males	2	..	1	..	..	1	..	2	....	1	2	....	..	..	....	....	2	1	....	2	2	1	....	....	1	....	..	9	....
	Females	2	1	..	2	..	..	..	1	1	....	2	....	..	..	2	....	1	2	....	1	....	1	....	....	....	2	..	9	18
Canaan	Males	2	..	1	2	1	..	1	....	1	5	3	1	..	1	3	1	....	1	3	2	2	3	2	....	....	1	..	18	....
	Females	..	..	..	3	..	2	2	1	1	5	3	1	..	..	5	2	1	1	3	....	1	1	....	1	1	2	..	18	36
Dorchester	Males	..	..	..	..	..	1	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	....	..	1	....
	Females	..	1	..	..	..	..	..	1	....	....	....	....	..	..	1	....	....	1	....	....	....	....	....	....	....	....	..	2	3

Easton	Males	..	..	..	..	..	..	2	....	....	....	....	....	..	..	....	1	1	....	....	....	....	....	....	....	....	..	2	....
	Females	1	..	..	..	..	..	..	....	....	....	1	....	..	..	1	1	....	....	....	....	....	....	....	....	....	..	2	4
Ellsworth	Males	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	..	....	....
	Females	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	..	....	....
Enfield	Males	7	..	..	..	1	1	..	1	2	2	1	1	..	..	3	1	2	....	4	1	....	2	....	1	1	1	..	16	....
	Females	1	..	..	..	1	3	..	2	5	4	7	....	..	..	3	6	2	....	1	....	1	2	3	....	3	2	..	23	39
Franconia	Males	..	..	..	..	..	..	..	1	....	....	1	....	..	..	....	....	....	2	....	....	....	....	....	....	....	....	..	2	....
	Females	..	..	..	..	..	1	..	1	....	....	1	1	..	..	....	1	1	....	....	....	1	....	....	....	....	1	..	4	6
Grafton	Males	4	1	1	..	..	2	1	1	....	1	2	....	..	..	3	2	1	2	....	1	...	....	1	1	....	2	..	13	....
	Females	2	..	1	1	..	..	1	2	2	....	3	3	..	..	5	5	1	....	....	....	1	....	....	1	....	1	1	15	28
Groton	Males	..	..	..	1	..	..	..	1	1	3	3	....	..	..	1	2	1	1	....	2	....	....	1	1	....	....	..	9	....
	Females	1	..	1	..	..	1	2	....	2	4	....	1	..	..	6	3	....	2	....	....	....	....	....	1	....	....	..	12	21
Hanover	Males	..	..	..	..	1	..	..	1	4	6	3	....	..	..	4	2	....	3	1	....	1	1	1	1	....	1	..	15	....
	Females	..	..	..	..	1	..	1	2	....	2	6	....	..	..	1	3	1	....	2	....	1	....	1	2	1	....	..	12	27
Haverhill	Males	2	1	..	1	2	2	3	1	2	10	6	....	..	1	2	3	4	3	2	1	5	4	2	1	2	2	..	31	....
	Females	2	..	1	..	3	..	..	6	2	5	4	1	..	2	1	3	2	1	4	1	2	1	1	5	....	2	3	26	57
Hebron	Males	..	..	..	..	..	..	..	....	....	2	1	....	..	..	1	....	....	....	1	....	....	....	1	....	....	....	..	3	....
	Females	2	..	..	..	..	..	..	....	....	1	....	....	..	..	....	....	....	....	1	....	....	....	1	1	....	....	..	3	6
Holderness	Males	..	..	..	..	1	..	1	2	1	3	1	....	..	2	1	....	2	2	1	....	2	....	1	1	1	....	..	11	....
	Females	..	..	..	..	..	..	1	1	....	2	2	....	..	..	4	....	....	....	1	....	....	....	....	....	1	....	..	6	17
Landaff	Males	1	1	..	..	..	..	..	....	1	1	....	....	..	..	2	....	....	....	....	....	....	1	1	....	....	....	..	4	....
	Females	..	..	..	..	..	1	1	....	1	....	1	....	..	..	....	....	....	1	....	1	....	1	....	1	....	....	..	4	8
Lebanon	Males	5	3	3	1	1	3	..	4	7	9	5	1	..	..	7	6	5	5	5	2	1	2	2	2	3	2	..	42	....
	Females	3	2	1	2	5	4	1	7	4	12	7	1	..	..	14	3	7	2	5	....	4	1	4	4	3	1	1	49	91
Lincoln	Males	..	..	..	..	1	..	..	....	....	....	1	....	..	..	....	1	....	....	....	....	1	....	....	....	....	....	..	2	....
	Females	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	2
Lisbon	Males	3	..	1	1	1	2	..	3	4	2	3	....	..	..	3	2	....	1	1	2	....	1	3	2	1	4	..	20	....
	Females	3	..	..	2	5	2	..	2	3	1	1	....	..	..	3	3	1	1	2	2	2	2	....	2	1	....	..	19	39
Littleton	Males	2	5	1	5	1	1	3	6	3	3	3	1	..	1	9	3	3	2	2	2	1	....	1	3	3	6	..	35	....
	Females	8	..	..	3	3	3	4	4	....	5	7	1	..	1	5	4	1	2	1	2	3	4	3	3	2	9	..	39	74

TABLE No. XVII.—*Continued.*

TOWNS IN GRAFTON COUNTY.—*Continued.*		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Livermore	Males	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	..	....	....	....	....	....	....	....	..	....	....
	Females	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....
Lyman	Males	..	1	..	1	..	..	1	....	1	1	1	....	..	..	....	....	2	1	....	1	....	....	1	1	....	....	..	6	....
	Females	..	..	..	..	..	..	..	1	....	....	....	....	..	..	1	....	....	....	....	....	....	....	....	....	....	....	..	1	7
Lyme	Males	1	..	..	..	..	..	1	1	1	5	2	....	..	1	2	1	....	1	1	....	....	1	2	2	1	..	12	....
	Females	..	1	..	..	..	1	2	1	3	1	2	....	..	..	1	1	3	1	....	....	1	....	1	1	....	2	..	11	23
Monroe	Males	2	..	..	..	..	..	..	....	....	2	2	....	..	..	1	....	....	....	1	2	1	....	....	1	....	....	..	6	....
	Females	1	..	..	..	..	..	..	1	1	1	....	....	..	..	....	....	....	2	2	....	....	....	....	....	....	....	..	4	10
Orange	Males	1	..	..	..	..	1	..	....	....	1	....	....	..	..	1	....	1	....	1	....	....	....	....	....	....	....	..	3	....
	Females	..	..	..	..	..	..	..	1	....	....	....	....	..	..	....	....	1	....	....	....	....	....	....	....	....	....	..	1	4
Orford	Males	..	..	1	..	..	..	..	....	2	1	4	....	..	..	....	1	....	2	1	....	2	1	....	....	....	1	..	8	....
	Females	2	..	..	1	1	1	....	1	4	2	....	....	..	..	....	1	1	2	1	1	2	....	2	2	....	1	..	13	21
Piermont	Males	..	..	..	..	..	..	..	....	....	2	1	....	..	..	....	....	1	1	....	....	....	....	....	1	....	....	..	3	....
	Females	..	..	..	1	..	..	..	....	1	1	3	....	..	..	....	2	....	1	....	2	....	....	....	1	....	....	..	6	9
Plymouth	Males	..	..	..	..	..	2	1	2	1	6	3	....	..	1	2	3	....	3	....	1	1	1	....	2	2	1	..	16	....
	Females	1	..	..	..	1	2	2	1	3	3	3	....	..	..	6	1	1	....	3	....	1	2	1	1	....	....	..	16	32
Rumney	Males	1	1	..	1	..	1	1	1	....	2	2	2	..	..	3	4	1	....	....	2	....	....	1	....	1	....	..	12	....
	Females	2	..	..	..	..	..	..	....	4	1	1	....	..	..	2	1	....	3	....	....	....	....	....	....	....	2	..	8	20
Thornton	Males	1	..	..	..	..	..	..	1	1	....	....	....	..	..	....	....	1	....	....	....	1	....	....	1	....	....	..	3	....
	Females	2	..	..	..	..	..	..	....	1	....	1	....	..	1	....	1	....	....	....	....	1	....	....	....	2	1	..	5	8

Warren	Males	..	..	..	1	..	..	....	1	....	2	....	..	..	1	....	....	....	....	....	1	....	....	....	1	....	1	4	....	
	Females	..	..	..	..	1	..	1	....	1	2	....	....	..	..	3	1	....	....	....	....	1	....	....	....	....	....	..	5	9	
Waterville	Males	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....	
	Females	..	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....	
Wentworth	Males	..	..	..	..	..	..	1	1	....	2	....	....	..	..	1	...	1	1	....	....	....	....	1	....	....	....	..	4	....	
	Females	..	..	..	..	..	..	1	....	....	1	1	....	..	..	....	1	....	....	....	....	....	1	....	....	....	1	..	3	7	
Woodstock	Males	1	..	..	..	..	..	..	1	1	....	....	1	..	..	....	....	1	1	....	....	....	....	1	....	1	....	..	4	....	
	Females	1	..	..	..	..	..	1	....	....	....	1	....	..	..	1	....	....	....	....	....	....	....	1	1	....	....	..	3	7	
Males		45	19	9	17	13	18	18	37	41	83	58	7	..	10	60	41	35	38	28	24	27	22	22	25	26	26	1	375	....	
Females		39	6	5	15	28	24	22	40	43	68	68	10	..	6	19	46	25	27	30	13	23	20	23	30	21	32	5	374	749	

TABLE No. XVII.—*Continued.*

TOWNS IN COÖS COUNTY.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Berlin	Males.	27	10	2	..	5	5	3	2	1	....	1	....	..	1	3	5	1	7	3	2	9	9	1	8	4	3	2	57	....
	Females.	19	9	2	5	3	3	2	1	1	....	1	....	..	2	6	4	3	2	1	5	8	4	6	4	3	2	..	48	105
Cambridge	Males.	..	..	..	..	..	..	..	..	..	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	....	....	..	....	....
	Females.	..	..	..	..	..	..	..	..	..	1	....	....	..	..	....	....	....	....	....	1	....	....	....	....	....	....	..	1	1
Carroll	Males.	..	..	..	2	..	1	1	1	....	....	....	....	..	1	....	1	2	....	....	....	....	....	1	....	2	....	..	6	....
	Females.	..	1	..	..	..	..	..	....	....	1	1	....	..	1	....	1	....	....	....	....	2	....	1	....	....	....	..	4	10
Clarksville	Males.	1	..	..	..	..	1	..	....	....	....	....	....	..	..	1	....	....	....	....	....	....	....	....	1	....	....	..	2	....
	Females.	..	..	..	..	..	2	..	1	1	....	....	1	..	..	1	2	....	1	....	....	....	....	....	....	1	....	..	5	7
Colebrook	Males.	1	..	1	1	1	2	2	1	5	3	3	....	..	..	3	4	3	2	1	1	2	....	....	1	2	1	..	20	....
	Females.	3	2	2	2	..	..	..	1	....	4	....	....	..	..	2	....	4	3	1	1	1	....	....	....	2	....	..	14	34
Columbia	Males.	..	..	..	..	..	1	..	....	1	2	....	....	..	..	....	....	1	....	2	....	....	....	....	....	....	1	..	4	....
	Females.	1	..	..	..	..	..	..	....	....	....	1	....	..	..	....	....	....	....	1	1	....	....	....	....	....	....	..	2	6
Dalton	Males.	..	..	..	..	..	..	..	....	1	2	....	....	..	..	....	2	....	....	....	1	....	....	....	....	....	....	..	3	....
	Females.	..	..	..	..	2	..	2	1	....	....	....	....	..	..	....	....	2	....	....	....	1	1	1	....	....	....	..	5	8
Dummer	Males.	..	..	..	..	1	..	1	....	....	....	1	....	..	..	....	....	1	....	....	1	....	1	....	....	....	....	..	3	....
	Females.	..	..	..	..	1	..	1	....	....	....	....	....	..	..	....	....	....	....	....	....	....	1	1	....	....	....	..	2	5
Errol	Males.	..	..	..	..	1	..	..	....	....	....	....	....	..	..	....	....	....	....	....	....	....	....	....	....	1	....	..	1	....
	Females.	1	..	..	..	..	..	..	....	....	....	....	....	..	..	....	....	....	1	....	....	....	....	....	....	....	....	..	1	2
Gorham	Males.	3	4	..	..	1	2	2	2	....	2	1	....	..	4	3	1	1	2	3	2	....	....	2	2	2	3	..	21	....
	Females.	1	1	..	3	..	1	1	1	....	2	....	....	..	1	6	....	....	1	1	....	....	1	1	....	....	1	..	11	32

Jefferson	Males	2	1	..	..	..	1	1	2	3	..	..	..	..	..	..	..	..	2	1	..	1	..	1	1	..	4	..	10	..
	Females	..	1	..	..	1	..	..	3	1	2	1	..	..	1	..	2	1	1	1	1	..	2	..	1	..	1	..	10	20
Lancaster	Males	5	1	..	2	1	1	..	3	1	4	5	..	..	1	4	..	3	1	3	2	1	3	3	3	1	..	..	24	..
	Females	2	..	..	2	5	2	4	..	3	4	2	..	..	..	3	1	3	..	1	4	2	2	2	2	..	4	..	24	48
Milan	Males	2	..	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	2	..	1	..	..	2	..	..	..	..	5	..
	Females	5	1	..	..	..	1	1	..	1	..	1	1	..	1	1	..	..	..	1	2	..	2	..	2	2	2	..	12	17
Millsfield	Males	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Females	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northumberland	Males.	1	..	..	..	1	..	2	1	3	..	4	..	..	..	..	..	..	1	1	1	..	4	2	..	1	2	..	12	..
	Females	2	..	..	1	..	1	..	1	1	2	..	..	..	..	1	..	2	..	..	..	2	2	..	..	1	..	..	8	20
Pittsburg	Males	..	1	..	..	..	..	..	..	..	..	2	..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	3	..
	Females	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	2	5
Randolph	Males	1	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	2	..
	Females	..	1	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	1	4	6
Shelburne	Males	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
	Females	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Stark	Males	2	..	..	..	2	2	..	..	1	..	2	..	..	..	1	1	..	..	..	1	..	..	2	2	1	1	..	9	..
	Females	4	1	..	..	..	1	..	..	..	1	..	..	..	..	..	2	..	1	1	..	..	..	2	1	..	..	..	7	16
Stratford	Males	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	2	1	..	..	..	..	4	..
	Females	..	2	1	1	1	..	1	..	3	..	2	..	..	..	2	..	..	..	..	..	2	1	1	1	3	1	..	11	15
Stewartstown	Males	2	..	..	1	..	1	2	2	2	..	..	..	..	1	3	..	..	..	2	..	1	2	..	2	..	1	..	11	..
	Females	4	..	..	..	..	2	1	..	..	4	2	..	..	1	2	1	2	1	..	1	2	1	2	1	1	..	..	14	25
Whitefield	Males	3	..	1	..	1	..	3	1	2	1	1	..	..	1	3	..	1	1	..	..	..	..	3	..	2	4	..	14	..
	Females	5	..	1	2	5	3	2	..	3	..	2	..	..	1	1	3	3	2	6	1	2	2	1	1	1	1	..	24	38
Males		54	19	4	6	15	17	17	15	21	15	20	..	1	8	22	14	14	18	17	14	14	21	18	21	16	21	2	212	..
Females		47	19	6	16	18	16	15	10	15	24	13	2	..	8	26	16	20	13	17	17	22	21	17	12	15	12	1	209	421

TABLE

Deaths by Sex

COUNTIES.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.
Rockingham	Males	85	22	14	25	34	33	30	42	79	90	58
	Females	61	26	9	20	42	32	29	36	81	76	66
Strafford	Males	92	35	11	17	20	22	35	32	43	62	31
	Females	86	39	15	27	31	36	34	26	41	54	54
Belknap	Males	35	17	4	10	11	11	9	23	24	36	23
	Females	27	14	5	10	14	10	17	23	31	33	31
Carroll	Males	21	10	3	7	12	9	14	13	30	37	19
	Females	12	5	....	3	14	9	14	17	30	28	20
Merrimack	Males	92	26	11	21	37	30	34	41	76	81	54
	Females	69	35	13	19	35	33	37	61	61	86	60
Hillsborough	Males	326	80	17	34	58	60	47	71	111	126	78
	Females	258	81	20	47	72	82	74	97	99	107	79
Cheshire	Males	61	19	7	8	16	17	15	22	48	56	29
	Females	36	17	9	10	20	19	16	27	36	47	47
Sullivan	Males	31	4	2	4	6	3	11	15	29	42	38
	Females	16	7	4	4	10	12	14	16	27	39	33
Grafton	Males	45	19	9	17	13	18	18	37	41	83	58
	Females	39	6	5	15	28	24	22	40	43	68	68
Coös	Males	54	19	4	6	15	17	17	15	21	15	20
	Females	47	19	6	16	18	16	15	10	15	24	13
Total	Males	842	251	82	149	222	220	230	311	502	628	408
	Females	651	249	86	171	284	273	272	353	464	562	471

No. XVIII.

*Age, and Month.**

90 to 100.	Over 100.	Unknown.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
4	....	8	85	48	44	42	35	32	44	42	38	34	40	39	1	524	.....
17	....	5	96	47	50	36	37	36	34	35	40	29	35	24	1	500	1,024
1	1	7	60	27	33	28	40	24	34	42	28	36	33	23	1	409	.....
7	1	4	73	40	46	43	41	29	31	40	30	20	33	26	3	455	864
1	....	7	37	22	17	14	17	17	14	21	13	10	20	9	....	211	.....
7	....	7	47	29	20	14	17	25	16	13	16	10	11	10	1	229	440
....	....	8	43	11	10	19	9	11	10	14	16	11	14	14	1	183	.....
4	....	3	30	10	13	14	18	12	12	10	12	10	9	9	....	159	342
10	1	10	97	44	34	46	42	20	40	52	33	39	43	33	1	524	.....
18	....	10	127	36	41	42	32	25	35	47	47	40	32	32	1	537	1,106
6	1	21	153	94	85	76	66	64	119	101	66	73	61	75	3	1,036	.....
15	....	13	154	81	78	74	73	68	123	96	76	81	72	68	1	1,044	2,080
6	....	9	46	41	40	27	20	27	24	24	27	11	12	14	....	313	.....
9	....	2	51	34	31	24	24	13	13	21	21	24	24	14	....	295	608
6	....	3	41	22	12	16	14	7	19	18	11	10	14	9	1	194	.....
5	....	1	48	18	9	23	11	9	11	5	19	10	7	8	....	188	382
7	....	10	60	41	35	38	28	24	27	22	22	25	26	26	1	375	.....
10	....	6	79	46	25	27	30	13	23	20	23	30	21	32	5	374	579
....	1	8	22	14	14	18	17	14	14	21	18	21	16	21	2	212	.....
2	....	8	26	16	20	13	17	17	22	21	17	12	15	12	1	209	421
41	4	91	644	364	324	324	288	240	345	357	272	270	279	263	11	3,981	.....
94	1	59	731	357	333	310	300	247	320	318	301	266	259	235	13	3,990	7,971

* Not including deaths with sex not stated.

TABLE No. XIX.

Causes of Death alphabetically arranged, by Ages, Sex, and Months.

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F..	1	..	..	..	..	..	..	..	..	..	..	..	..	Anasarca	1	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....
M..	..	..	1	..	..	..	..	1	..	..	..	..	..	Abscess	7	2	5	....	....	1	....	....	....	....	1	....	....	....	....	....	....
F..	1	..	..	1	..	2	..	..	..	1	..	..	..	"	....	....	....	....	....	....	....	1	1	....	....	1	2	....	....	....	....
M..	1	..	..	..	..	..	1	..	..	..	..	..	..	" of brain	2	2	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....
M..	..	..	..	..	..	..	..	..	..	..	..	..	..	" of abdomen	2	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....
F..	..	1	..	1	..	..	..	..	..	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....
F..	1	..	..	..	..	..	..	..	..	1	..	..	..	" of liver	2	....	2	....	....	....	....	....	....	....	....	....	1	1	....	....	....
M..	..	..	..	..	..	1	..	..	..	..	..	..	..	" local	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
M..	1	1	..	1	..	..	..	..	..	..	..	1	..	" of lungs	6	4	2	....	....	....	....	....	1	....	1	1	1	....	....	....	....
F..	1	1	..	..	..	..	..	..	..	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....
F..	..	..	..	..	..	..	..	..	..	1	..	..	..	" of kidney	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....
F..	..	..	1	..	..	..	..	..	..	..	..	..	..	" of psoas	1	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
M..	..	..	1	..	..	..	..	..	..	..	..	..	..	" of spinal	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
M..	..	..	..	..	1	..	..	..	..	..	..	..	..	" of mastoid	1	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
F..	..	..	..	..	..	..	..	..	..	..	1	..	..	" of pelvis	1	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....
M..	1	..	..	2	..	..	..	..	..	..	2	1	..	Alcoholism	6	6	....	....	....	....	....	....	....	....	....	3	....	2	1	....	....
M..	4	6	5	4	1	2	5	7	4	10	6	4	..	Accidental	64	58	6	....	....	2	2	3	3	9	8	4	8	8	6	4	1
F..	..	..	2	..	..	..	1	..	..	2	..	1	..	"	....	....	....	....	1	....	....	1	....	....	....	1	1	1	....	1	....
M..	..	3	2	2	1	1	..	1	..	..	..	1	..	Anæmia	30	11	19	....	3	....	....	....	....	....	....	....	....	3	4	....	1
F..	2	..	1	1	3	3	2	1	3	2	1	..	..	"	....	....	....	....	3	....	2	1	2	3	2	2	2	....	1	1	....
F..	..	..	..	..	..	..	..	..	1	..	..	..	..	Aneurism	1	....	1	....	....	....	....	....	....	....	....	....	....	2	....	....	....
M..	..	..	..	..	..	1	..	..	..	1	..	..	..	Appendicitis	3	2	1	....	....	....	....	1	....	....	1	....	....	....	....	....	....
F..	..	..	..	..	..	..	..	1	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
M..	17	10	9	14	11	8	7	19	13	11	21	17	..	Apoplexy	308	158	150	....	....	....	....	....	....	....	1	12	21	43	44	32	5
F..	18	13	12	12	16	4	11	5	17	12	16	12	2	"	....	....	....	....	....	....	....	....	....	1	4	8	29	30	49	25	4
M..	..	1	..	1	..	..	..	..	2	..	1	..	..	Asphyxia	8	5	3	....	2	....	....	....	....	....	....	1	1	....	....	....	1
F..	..	1	1	..	1	..	..	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2

M..	..	2	1	2	..	..	..	..	1	3	..	..	..	Asthma	19	9	10	....	1	....	....	....	....	....	1	....	1	1	2	3	....
F..	4	1	1	1	1	..	..	..	1	..	1	..	..	"	....	....	....	....	....	....	....	....	....	....	....	1	2	3	2	2	....
M..	..	..	..	..	1	..	..	..	..	..	..	..	..	Ascites	1	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
M..	..	..	..	..	..	..	..	..	2	1	..	..	..	Asthenia	4	3	1	....	....	....	....	....	....	....	....	....	....	....	3	....	....
F...	..	..	1	..	..	..	..	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
M..	..	..	..	1	..	..	..	1	..	1	..	..	..	Bladder, disease of	3	3	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....
M..	..	1	2	4	..	3	2	1	1	..	1	1	..	Blood poisoning	26	16	10	....	1	....	....	....	1	2	2	....	1	5	2	....	2
F...	2	1	..	1	1	2	1	..	2	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	3	1	1	2	2	....	1	....
M..	..	1	1	..	2	..	..	..	1	..	..	2	..	Bowels, disease of	8	7	1	....	4	1	....	....	1	....	....	....	....	1	....	....	....
F...	..	..	..	..	..	..	..	..	1	..	..	..	..	" "	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
M..	7	3	4	3	2	4	3	3	..	3	7	3	..	Brain, disease of	76	42	34	....	6	3	....	....	1	1	2	5	5	9	5	3	2
F...	5	1	5	..	5	3	4	3	5	..	1	2	..	" "	....	....	....	....	3	3	....	....	....	....	4	3	5	6	3	7	....
M..	1	2	..	1	1	1	2	2	..	2	1	..	..	" congestion of	27	13	14	....	7	....	....	....	....	....	2	1	1	....	....	2	....
F...	1	..	..	1	1	..	3	3	1	2	1	1	..	" "	....	....	....	....	3	5	1	....	....	1	....	1	....	1	....	1	1
M..	..	..	..	..	2	..	..	..	..	..	..	1	..	" fever	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....	....	....
F...	..	..	..	..	2	..	..	..	..	..	..	..	..	" "	5	3	2	....	1	....	....	1	....	....	....	....	....	....	....	....	....
M..	3	5	1	4	3	..	2	..	1	..	2	2	..	" softening of	31	23	8	....	....	....	....	....	....	....	2	....	2	2	16	1	....
F...	3	2	..	..	..	1	1	..	1	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	1	1	2	1	3	....	....
M..	23	15	16	5	4	6	5	3	1	3	4	10	..	Bronchitis	217	95	122	....	23	11	....	1	....	1	3	3	3	11	26	12	1
F...	38	14	9	13	8	2	1	5	8	9	4	10	1	"	....	....	....	....	25	9	2	....	1	2	1	6	11	19	27	18	1
M..	..	..	..	..	1	1	1	..	..	1	1	..	..	Burns and scalds	12	5	7	....	....	1	....	....	....	....	....	1	....	1	2	....	....
F...	..	1	1	1	1	1	..	..	..	1	..	1	..	" "	....	....	....	....	....	1	....	....	....	....	1	2	1	....	2	....	....
M..	2	2	2	3	2	..	2	3	1	1	..	2	..	Cancer	111	20	91	....	....	....	....	....	....	....	....	1	4	4	7	4	....
F...	9	9	7	7	9	5	6	5	7	6	7	14	..	"	....	....	....	....	....	....	....	....	....	1	6	18	25	18	16	6	1
M..	..	..	..	1	..	..	..	1	..	1	2	1	..	" of bowels	10	6	4	....	....	....	....	....	....	....	....	....	2	1	2	1	....
F...	1	1	1	..	..	..	..	..	..	..	1	..	..	" "	....	....	....	....	....	....	....	....	....	....	....	....	1	2	1	....	....
M..	..	..	..	..	1	1	..	..	..	..	..	1	..	" of neck	4	3	1	....	....	....	....	....	....	....	....	....	1	1	1	....	....
F...	..	..	..	..	..	1	..	..	..	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
M..	..	..	..	..	..	..	..	..	..	..	..	..	..	" of breast	10	....	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....
F...	..	..	1	1	1	2	..	..	1	2	1	1	..	" "	....	....	....	....	....	....	....	....	....	....	....	....	3	3	4	....	....
M..	2	1	..	1	2	1	..	..	..	..	..	2	..	" of face	10	9	1	....	....	....	....	....	....	....	....	1	2	4	2	....	....
F...	..	..	..	..	1	..	..	..	..	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
M..	..	..	1	..	1	..	..	2	2	..	..	..	..	" of liver	15	6	9	....	....	1	....	....	....	....	....	....	1	2	2	....	....
F...	1	1	1	..	1	1	1	1	..	1	1	..	..	" "	....	....	....	....	....	....	....	....	....	1	....	2	2	3	1	....	....
M..	..	..	..	..	..	..	..	..	1	..	..	..	..	" of rectum	3	1	2	....	....	....	....	....	....	....	....	....	1	....	....	....	....
F...	..	..	1	..	..	1	..	..	..	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....	....
M..	4	1	1	3	1	5	3	1	..	1	1	1	..	" of stomach	48	22	26	....	....	....	....	....	....	....	2	4	3	6	6	1	....
F...	3	..	1	4	1	..	7	4	2	2	1	1	..	" "	....	....	....	....	....	....	....	....	....	1	2	6	2	8	5	1	1
M..	..	..	..	..	2	..	..	..	..	..	..	..	..	" of tongue	3	2	1	....	....	....	....	....	....	....	....	....	....	2	....	....	....
F...	..	..	..	..	..	..	..	..	..	1	..	..	..	" "	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
F...	2	1	4	1	2	1	1	3	3	2	1	..	..	" of uterus	21	....	21	....	....	....	....	....	....	2	4	2	4	8	....	1	....
M..	1	..	..	..	..	..	..	..	..	1	..	..	..	Caries of bone	2	2	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....
F...	..	..	..	..	1	..	..	..	..	..	..	..	..	Catarrh	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....
M..	1	1	..	..	1	..	..	1	..	..	..	..	..	" gastric	7	4	3	....	2	1	....	....	....	....	....	....	....	....	1	....	....

TABLE No. XIX.—*Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Totals.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F..	..	..	..	..	..	..	1	..	..	1	1	..	..	Catarrh, gastric	....	....	....	....	1	....	....	....	....	....	....	1	....	....	1	....	....
M..	1	..	..	..	..	..	..	..	..	..	..	..	..	Cellulitis	1	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
M..	..	..	..	..	1	..	1	..	1	..	..	..	..	Cerebritis	7	3	4	....	....	....	....	....	....	....	....	1	1	....	1	....	....
F..	1	..	..	..	..	1	..	1	..	1	..	..	..	"	....	....	....	....	1	1	....	....	....	....	....	....	....	....	1	1	....	....
F..	4	1	..	2	2	..	1	1	..	3	1	1	..	Childbirth	16	....	16	....	....	....	....	....	....	8	4	3	....	....	....	....	1
M..	..	..	..	..	1	..	..	..	..	..	..	..	..	Consumption of the blood	3	1	2	....	....	....	....	....	....	....	....	....	....	1	....	....	....
F..	..	1	..	..	..	..	..	..	1	..	..	..	..	" "	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....
F..	..	..	..	..	..	..	..	..	..	..	..	..	..	Cholera	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
M..	1	..	2	3	3	7	55	71	31	12	3	4	1	Cholera infantum	366	193	173	....	167	23	3	....	....	....	....	....	....	....	....	....	....
F..	1	1	..	2	3	4	51	65	34	7	2	2	1	" "	....	....	....	....	152	19	1	1	....	....	....	....	....	....	....	....	....
M..	..	..	..	..	..	..	..	5	2	..	..	..	..	Cholera morbus	17	7	10	....	1	....	....	....	....	1	....	....	1	2	2	....	....
F..	..	1	..	..	..	2	2	2	2	1	..	..	..	" "	....	....	....	....	2	....	....	....	1	2	....	2	....	2	1	....	....
M..	..	1	..	1	..	..	..	..	..	..	..	..	..	Cold	2	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
F..	..	..	..	..	..	..	..	..	..	..	..	1	..	Cough	1	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....
M..	1	..	..	..	..	..	..	..	1	..	..	..	..	Colic	4	2	2	....	....	....	....	....	....	....	....	1	....	1	....	....	....
F..	..	..	..	..	..	..	..	1	..	..	1	..	..	Colic	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
M..	..	..	..	..	..	..	..	..	..	..	..	1	..	Chorea, chronic	1	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
M..	1	..	..	..	..	..	..	..	..	..	..	1	..	Congestion	2	1	....	*1	....	....	1	....	....	....	....	....	....	....	....	....	1
M..	30	32	32	29	23	19	32	16	24	27	26	25	3	Consumption	736	318	418	....	5	6	1	4	22	67	62	36	39	37	22	10	7
F..	37	37	38	29	41	31	44	41	29	33	40	18	..	"	....	....	....	....	9	6	1	18	44	111	88	48	28	34	19	10	2
M..	5	6	3	2	5	4	2	5	4	2	4	2	..	Convulsions	78	44	34	....	31	11	....	1	....	....	....	....	....	....	....	....	1
F..	4	3	2	2	3	3	4	2	4	3	2	2	..	"	....	....	....	....	13	13	5	....	1	1	....	1	....	....	....	....	....
M..	..	..	1	1	1	..	..	..	..	..	2	2	..	Concussion of brain	9	7	2	....	....	....	1	....	....	2	....	1	....	2	1	....	....
F..	..	..	..	..	..	..	..	..	..	..	..	2	..	" "	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....
M..	3	3	4	..	6	1	..	1	2	5	3	..	..	Croup	45	28	17	....	4	21	3	....	....	....	....	....	....	....	....	....	....
F..	1	1	1	2	1	1	1	2	1	..	5	1	..	"	....	....	....	....	2	10	3	1	1	....	....	....	....	....	....	....	....
M..	1	2	..	..	1	..	..	..	..	2	..	2	..	Cyanosis	11	8	3	....	7	....	....	....	....	....	....	....	....	....	....	....	1
F..	..	..	..	..	..	1	..	1	1	..	..	..	..	"	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	1

M	3	3	4	3	2	1	2	5	1	1	1	2		Cystitis	28	28									1		1	4	15	7	
M		3	5	2	3	3	1	2	4	1		1		Debility	55	25	30		1					1				2	10	9	2
F	6	3	3	5	2	1	2	2	2	1	2	1		"					4					1	1			8	5	11	
M				1				1						Delirium tremens	2	2										1	1				
M	3	4		2	2	3	2		1		3	2		Diabetes	39	22	17					1	3	1	3	1	2	6	5		
F	4	1		1		2	2	1	1	1	3	1		"							2	1		1	1	5	2	2	1		2
M	2	2	3		2	3	6	4	6	3	1	3		Diarrhœa	53	35	18		12	4						1	3	5	6	3	1
F	1			2				7	4	2	2			"					9					1	1		1	2	1	3	
M	11	8	12	2	4	10	5	1	3	9	5	1		Diphtheria	134	71	63		3	29	22	7	4	2	1	2					1
F	6	5	5	7	9	14	8			3	6			"					6	25	15	7	1	4	1			2			2
M	2			2	2	1	1	2	1	1	2	3		Dropsy	43	17	26			2						1	3	2	7	2	
F	2	1	2	1	2	5	1	4	1	3	3	1		"						1		1				6	4	5	5	3	1
M	2		1	3	7	6	9	9	2	3	2	3		Drowned	49	47	2			5	7	4	8	11	5	1	2	1	2		1
F								1		1				"									1							1	
M							1	10	4	2	3	3		Dysentery	42	23	19		10	3		1		1	1			3	3	1	
F	1			1		1	2	5	3		4	2		"					2	2	1			1		1		7	3	2	
M	1			1										Dyspepsia, chronic	2	2											1				1
M					1					1		1		Eczema	3	3													3		
F								1						Eclampsia	1		1											1			
M										1				Encephalitis	2	1	1													1	
F											1			"							1										
M	1		2	1	2	4	7	4	2			1		Enteritis	46	24	22		12	1			1	3		2			2	3	
F			1	1	3	2	5	2	5		2	1		"					3	3	1		3	4	2	2			2	2	
M	2		1	2	1	1		2			2			Epilepsy	21	11	10		1					1	2	1	3	2		1	
F	1	1	1	1	3				1	1	1			"						2		1		2		2	3				
M	2	3	1	2	2		2	1			1			Erysipelas	29	14	15		4	2						1	1	2	2	2	
F	1	5	2	2	1	1	2			1				"					3	1					2	1	1	3	1	3	
F								1		1				Fever	2		2											1		1	
M														" bilious	2		2														
F						1	1							" "										1						1	
M														" remittent	1		1														
F												1		" "												1					
M	1											1		" malarial	2	2								1				1			
F	4		4	2	1	2		2	3	3		1		" puerperal	22		22						6	11	4	1					
M														" rheumatic	3		3														
F			2				1							" "									1	1					1		
M	6	2	4	1	2	1	2	4	5	12	7	6		" typhoid	104	52	52			4	1	2	10	13	12	1	3	3	1		2
F	2	2	1	1	7	2	4	2	11	6	9	5		" "					1	2	3	8	7	10	6	6	2	2	2	2	1
M	1	1												" cerebro spinal	5	2	3									2					
F	1											2		" "					2					1							
M											1			Fits, epileptic	2	1	1									1					
F									1					" "													1				
M	2		2	1	1		1	3	1	2		1		Fracture	28	14	14			1	2		2	1	3	4				1	

* Classed with males.

TABLE No. XIX.—*Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F...	3	1	..	..	..	1	..	3	3	1	1	1	..	Fracture	....	....	....	....	....	1	....	....	....	1	....	....	....	2	5	5	....
F...	....	..	..	..	..	1	..	..	..	..	..	..	..	Fits	1	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
M ..	3	..	1	2	..	1	1	2	1	..	..	1	..	Gangrene	24	12	12	....	....	....	....	....	....	....	....	....	2	1	3	6	....
F...	....	2	2	1	1	..	..	3	1	1	..	1	..	"	....	....	....	....	....	....	....	....	....	....	1	....	....	4	3	3	1
M ..	2	1	1	1	1	4	..	2	4	3	2	1	..	Gastritis	68	22	46	....	2	1	1	....	....	2	5	2	1	2	4	1	1
F...	4	2	9	4	4	6	4	1	4	4	1	3	..	"	....	....	....	....	7	1	....	1	2	7	5	4	3	6	6	3	1
F...	....	..	..	..	..	..	1	..	..	1	..	..	..	Glandular disease	2	....	2	....	....	....	....	....	....	....	1	....	....	....	1	....	....
M ..	....	..	1	..	..	..	..	..	..	..	..	..	..	Glottis, Oedema of	2	1	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....
F...	....	..	1	..	..	..	..	..	..	..	..	..	..	" "	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
M ..	....	..	..	..	..	..	..	..	..	..	1	..	..	Goitre	3	1	2	....	....	....	....	....	....	....	....	....	....	1	....	....	....
F...	....	..	..	..	..	..	..	..	..	1	1	..	..	"	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....
M ..	....	..	..	..	..	..	..	..	..	1	..	..	..	Gall stones	1	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
M ..	3	..	1	..	1	..	1	..	..	..	..	..	..	Headache	13	6	7	....	2	3	1	....	....	....	....	....	....	....	....	....	....
F...	1	..	..	2	2	..	1	..	..	..	1	..	..	"	....	....	....	....	....	5	1	....	....	....	....	....	....	....	....	....	1
M ..	37	30	18	25	24	31	31	30	26	20	35	18	1	Heart disease	599	326	273	....	11	3	2	5	8	9	14	27	42	75	83	41	6
F...	49	20	23	22	14	13	23	25	21	20	21	21	1	" "	....	....	....	....	5	2	3	4	5	11	19	27	44	52	64	37	....
M ..	13	7	9	9	4	9	5	7	5	6	5	3	..	Heart failure	157	82	75	....	5	....	....	....	2	5	4	8	13	15	18	10	2
F...	16	13	10	10	3	2	1	2	1	9	3	5	..	" "	....	....	....	....	2	1	1	1	4	4	5	5	9	18	12	12	1
M ..	....	..	..	1	..	..	1	..	1	1	1	1	..	Hemorrhage	9	6	3	....	....	....	....	....	....	2	....	1	1	1	1	....	....
F...	1	..	1	..	1	..	..	..	..	..	..	..	..	"	....	....	....	....	2	....	....	....	....	....	....	....	1	....	....	....	....
M ..	1	..	..	1	..	1	2	1	..	4	1	..	..	Hepatitis	20	11	9	....	2	....	....	....	....	2	1	1	3	....	1	....	....
F...	2	..	..	..	1	1	..	..	1	2	2	..	..	"	....	....	....	....	....	....	....	....	....	....	2	1	2	2	1	1	....
M ..	....	1	..	..	..	..	..	..	..	..	..	..	..	Hernia	13	5	8	....	1	....	....	....	....	....	....	....	1	....	1	1	1
F...	....	1	1	..	..	..	2	..	..	1	1	2	..	"	....	....	....	....	....	....	....	....	....	....	....	....	1	3	3	1	....
M ..	....	..	..	..	1	..	1	..	..	..	..	..	..	Hemorrhage of bowels	7	2	5	....	1	....	....	....	....	....	....	....	....	....	....	....	1
F...	....	..	1	2	..	..	..	1	..	1	..	..	..	" "	....	....	....	....	2	....	....	1	....	....	1	....	....	....	....	....	1
M ..	2	..	..	..	..	..	..	..	..	..	..	..	..	Hemorrhage of stomach	4	2	2	....	....	....	....	....	....	....	....	1	....	1	....	....	....
F...	....	..	..	..	1	..	1	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....
M ..	....	..	..	..	..	..	..	1	..	..	..	..	..	Hemorrhoids	1	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....

M..	1	2	..	..	2	..	2	3	..	1	..	1	..	Hydrocephalus	16	12	4	....	8	3	1	....	....	....	....	....	....	....	....	....	....
F...	...	..	..	1	..	..	2	..	..	1	..	..	..	"	....	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....
F...	...	..	..	..	..	..	..	..	..	..	..	1	..	Hydrothorax	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....
M..	...	..	4	3	1	1	1	3	1	3	..	3	..	Inanition	37	19	17	*1	18	....	....	....	....	....	....	....	....	....	1	....	1
F...	2	1	3	..	1	1	2	2	1	2	..	2	..	"	....	....	....	....	13	1	....	....	....	....	....	....	....	2	1	....	....
F...	...	..	1	..	..	..	..	..	..	..	..	..	..	Insagination of the rectum	1	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....
M..	5	3	5	4	4	3	3	8	5	8	8	2	..	Infantile debility	101	54	46	*1	46	....	....	....	....	....	....	....	....	....	....	....	9
F...	4	3	5	1	8	3	2	3	5	9	..	3	..	" "	....	....	....	....	39	5	....	....	....	....	....	....	....	....	....	....	2
M..	...	..	2	..	..	..	..	..	..	..	1	..	..	Inflammation	4	3	1	....	....	1	....	1	....	....	....	....	....	....	....	....	1
F...	...	..	..	..	..	1	..	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
M..	1	1	2	..	..	1	..	1	1	2	..	..	..	Inflammation of brain	15	9	6	....	4	1	....	....	1	1	....	1	....	1	....	....	....
F...	...	..	1	..	3	1	..	..	1	..	..	..	..	" "	....	....	....	....	1	2	....	....	....	....	1	....	....	1	1	....	....
M..	2	1	..	..	..	1	1	1	3	3	1	2	1	Inflammation of bowels	34	16	18	....	2	3	....	1	1	....	3	....	....	3	1	1	1
F...	4	1	3	1	1	1	2	2	1	2	..	..	..	" "	....	....	....	....	1	2	....	1	2	3	....	3	....	2	1	2	1
M..	76	35	13	9	6	3	1	..	1	..	..	..	..	Influenza	331	144	187	....	14	5	1	1	2	3	4	7	7	27	36	35	2
F...	108	42	19	4	6	2	1	1	2	1	..	1	..	"	....	....	....	....	12	11	1	1	1	3	6	4	10	22	51	65	....
M..	...	..	..	..	..	..	..	..	..	1	1	..	..	Insanity	10	2	8	....	....	....	....	....	....	....	1	....	....	....	....	....	1
F...	1	1	..	..	..	1	1	..	..	2	2	..	..	"	....	....	....	....	....	....	....	....	....	....	1	2	1	1	1	1	1
M..	...	..	..	1	..	..	..	..	..	..	..	..	..	Insanity, acute mania	7	1	6	....	....	....	....	....	....	....	....	....	....	....	1	....	....
F...	2	1	..	..	1	1	1	..	..	..	..	..	..	" " "	....	....	....	....	....	....	....	....	....	2	2	1	....	1	....	....	....
M..	...	3	..	..	3	1	..	..	1	..	1	1	..	" acute dementia	12	10	2	....	....	....	....	....	....	....	2	....	....	2	5	1	....
F...	...	..	1	..	..	..	1	..	..	..	..	..	..	" " "	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....
M..	...	..	..	..	..	..	..	..	..	..	..	1	..	" acute melancholia	4	1	3	....	....	....	....	....	....	....	....	....	....	1	....	....	....
F...	...	..	..	..	..	..	..	..	2	..	..	1	..	" " "	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2	....	....
M..	1	..	..	..	3	..	1	1	..	1	1	..	..	Intestinal obstruction	17	8	9	....	1	....	....	....	....	2	....	....	2	2	1	....	....
F...	...	2	..	3	1	..	1	..	..	..	1	1	..	" "	....	....	....	....	....	....	1	....	....	....	....	1	1	2	3	....	1
M..	...	..	..	..	1	1	2	..	..	2	..	..	..	Jaundice	8	6	2	....	3	1	....	....	....	....	1	....	....	....	1	....	....
F...	1	..	..	..	1	..	..	..	..	..	..	..	..	"	....	....	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....
M..	1	..	..	..	..	..	..	..	..	2	..	..	..	Joint disease	4	3	1	....	....	....	....	....	1	1	1	....	....	....	....	....	....
F...	...	..	..	..	..	..	..	..	..	..	1	..	..	" "	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
M..	...	..	2	3	..	..	..	2	4	1	..	1	..	Kidney disease	21	13	8	....	....	....	....	....	....	2	....	1	4	2	1	3	....
F...	1	1	..	1	2	2	..	1	..	..	..	..	..	" "	....	....	....	....	....	....	....	....	....	2	....	....	3	2	1	....	....
M..	...	..	..	..	..	2	..	..	..	..	1	.	..	Laryngitis	4	3	1	....	....	2	....	....	....	....	....	....	....	....	....	....	1
F...	1	..	..	..	..	..	..	..	..	..	..	..	..	"	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
M..	3	..	3	3	1	..	3	..	..	..	4	1	..	Liver disease	33	18	15	....	1	....	....	....	....	1	1	....	3	2	9	....	1
F...	3	1	2	1	1	1	..	..	2	1	2	1	..	" "	....	....	....	....	....	....	1	....	....	....	2	1	5	3	3	....	....
M..	1	..	1	1	1	..	2	..	1	..	..	1	..	Liver, cirrhosis of	12	8	4	....	....	....	....	....	....	....	....	1	....	3	3	1	....
F...	...	..	2	..	..	..	..	1	..	..	1	..	..	" "	....	....	....	....	....	....	....	....	....	....	....	2	....	2	....	....	....
M..	1	..	..	..	..	..	..	..	1	1	..	..	..	Locomot, ataxia	5	3	2	....	....	....	....	....	....	....	....	1	....	1	1	....	....
F...	...	..	..	..	1	..	..	..	..	..	..	..	1	" "	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....
M..	2	1	..	2	1	..	..	1	1	1	..	1	..	Lung disease	16	10	6	....	....	....	....	....	1	....	1	3	....	2	1	....	2
F...	...	1	..	..	1	1	..	..	..	1	..	2	..	" "	....	....	....	....	1	....	1	....	....	2	....	1	....	....	1	....	....
M..	...	1	2	2	2	1	..	..	..	1	3	1	..	Malformation	21	13	8	....	13	....	....	....	....	....	....	....	....	....	....	....	....

* Classed with males.

TABLE No. XIX.—*Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F...	1	..	..	1	..	2	..	2	..	..	1	1	..	Malformation	....	....	....	....	7	....	....	....	....	....	....	....	....	....	....	....	1
F...	..	2	..	..	..	..	..	..	..	..	..	..	..	Myelitis	2	....	2	....	....	....	1	....	....	....	....	....	....	1	....	....	....
M ..	..	..	..	..	..	..	..	1	..	..	..	..	..	Perforation of intestines	1	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
F...	..	..	..	..	..	..	..	..	1	..	..	..	..	Pyelitis	1	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....
M ..	4	2	4	5	..	..	2	2	3	3	2	3	..	Marasmus	60	30	30	....	16	2	....	....	....	1	....	....	....	5	4	2	....
F...	4	1	3	1	..	1	3	6	5	4	2	..	..	"	....	....	....	....	20	2	....	....	....	....	1	1	1	1	1	3	1
M ..	7	..	2	2	5	..	..	..	..	..	..	..	..	Measles	24	11	13	....	4	5	....	1	....	1	....	....	....	....	....	....	....
F...	2	7	1	1	..	1	..	1	..	..	..	..	..	"	....	....	....	....	3	6	....	....	1	2	....	....	1	....	....	....	..
M ..	8	6	5	7	2	3	9	5	1	1	2	2	1	Meningitis	104	52	52	....	23	14	2	1	2	1	3	2	2	....	2	....	....
F...	6	4	5	6	3	5	5	3	1	7	4	3	..	"	....	....	....	....	14	18	4	2	1	5	3	1	2	1	1	....	....
M ..	..	3	1	1	1	1	1	..	1	..	4	..	..	Cerebral meningitis	25	14	11	....	4	1	1	1	2	2	1	....	....	1	1	....	....
F...	3	1	1	1	..	2	..	..	1	..	2	..	..	" "	....	....	....	....	2	3	....	1	....	2	2	1	....	....	....	....	....	....
M ..	..	..	1	1	..	1	2	..	2	..	..	1	..	Meningitis, tubercular	24	8	16	....	3	1	1	....	1	1	1	....	....	....	....	....	....
F...	3	1	1	2	2	1	1	..	1	2	..	2	..	" "	....	....	....	....	5	6	3	1	1	....	....	....	....	....	....	....	....
M ..	..	2	1	1	..	..	..	..	1	..	..	..	..	Meningitis, cerebro spinal	14	5	9	....	1	2	....	....	....	1	....	....	....	....	....	1	....
F...	2	2	..	1	..	..	2	1	..	..	..	1	..	" " "	....	....	....	....	2	2	2	1	....	1	1	....	....	....	....	....	....
F...	..	1	..	..	..	..	..	1	..	..	..	..	..	Metritis	2	....	2	....	....	....	....	....	....	1	1	....	....	....	....	....	....
F...	..	..	..	..	..	..	2	..	..	..	..	1	..	Miscarriage	3	....	3	....	....	....	....	....	1	1	....	1	....	....	....	....	....
M ..	..	..	..	..	..	..	..	..	1	1	..	..	..	Murder	3	2	1	....	....	....	....	....	....	1	1	....	....	....	....	....	....
F...	..	..	..	1	..	..	..	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
M ..	6	6	8	9	8	4	9	6	5	4	6	5	1	Nephria (Bright's disease)	136	77	57	....	....	1	1	....	1	3	3	11	14	21	17	4	1
F...	8	4	5	3	3	5	5	5	3	6	3	9	..	" "	....	....	....	....	1	....	2	1	1	4	10	6	15	7	6	4	2
M ..	4	..	5	1	1	3	3	2	1	..	2	2	..	Nephritis	47	24	23	....	....	1	....	1	....	2	1	4	4	3	9	....	....
F...	2	2	..	3	6	..	1	2	..	2	3	2	..	"	....	....	....	....	....	1	....	2	1	1	2	3	2	6	4	1	....
M ..	1	3	..	..	..	..	1	1	1	..	1	..	..	Nervous prostration	17	8	9	....	....	....	....	....	....	....	1	1	2	2	2	....	....
F...	..	2	1	1	..	1	2	1	..	1	..	..	..	" "	....	....	....	....	....	....	....	....	....	1	....	2	2	3	1	....	....
M ..	..	..	..	..	1	..	..	..	..	..	..	..	..	Noma (canker)	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
F...	..	..	..	..	..	..	..	..	..	..	1	..	..	" "	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
M ..	30	16	22	15	12	14	22	11	20	13	7	21	..	Not stated	384	197	175	*6	101	22	6	....	5	7	2	4	4	9	18	6	19

F...	24	8	8	15	12	13	26	20	14	11	9	9	6	Not stated					75	17	3	1	3	8	10	6	8	13	6	8	17
M..	41	12	9	21	19	12	9	7	18	11	15	10		Old age	441	184	257										1	3	35	144	1
F...	52	26	30	23	11	18	10	15	24	12	17	19		"														6	68	133	
F...		1	1	1								1		Ovarian tumor	4		4								1	2			1		
M..						1								Obesity	1	1						1									
M..	16	10	13	10	8	5	7	5	3	4	6	6		Paralysis	204	93	111		1	2	1		1	1		4	6	25	37	15	
F...	11	12	9	10	11	10	7	7	8	10	9	7		"						1					1	9	12	24	33	29	2
M..	1			1		1			1					Pericarditis		4	7					1				1		2			
F...	1	1		1	2						2			"					1			1			1		1	2	1		
M..	2	2	1	1	2	4	5	5	1	2	4	3		Peritonitis	84	32	52		2		1		6		2		9	5	6	1	
F...	3	3	5	2	7	3	4	5	6	3	3	8		"					2	3	1	2	4	14	8	8	5	1	1	2	1
M..		2		1	1			2			2			Pleurisy	14	8	6						1	3	1	1	1		1		
F...	1		1	1	1	1			1					"									1	2			2		1		
M..	170	54	35	36	28	9	2	6	5	9	13	26	4	Pneumonia	843	397	446		43	25	7	4	4	22	29	29	34	66	79	52	3
F...	202	50	44	47	27	10	3	5	12	5	17	23	1	"					32	21	5	1	5	15	21	25	58	76	106	74	7
M..	5	3	1	1	1	1			1	5	3	2		Pneumonia-typhoides	47	23	24		1	2			2	2	4	4	2	2	2	1	1
F...	7	3	3	2	1	1			1	2	1	3		" "					1	1	1	1	1	2	7	2	1	3	3	1	
M..				1					1		1	1		Poisoned	10	4	6					1		1			2				
F...						1	1	1		2	1			"					1	2				2		1					
M..	7	3	5	2	7	3	7	3	3	1	5	2		Premature births	82	48	34		48												
F...	5	4	2	2	2	1	3	3	3	3	4	2		" "					34												
M..	1	1			1			1			2			Prostatitis	6	6													5	1	
F...								2						Puerperal convulsions	2		2								1	1					
M..														Purpura (scurvy)	3		3														
F...								1			2			" "						1	1				1						
M..				1	1		1			1				Pyæmia	10	4	6				1						1	1	1		
F...	1				2	1						2		"										3	1			1	1		
F...	1													Quinsy	1		1			1											
M..		1			1									Rickets	4	2	2			1			1	1							
F...	1							1						"						1					1						
F...					1									Rupture of blood vessel	1		1												1		
F...						1								Rupture of bowels	1		1											1			
M..	4	2	4		4	2	1	6	4	7	2	3		Railroad accident	42	39	3					1	3	13	9	2	4	3	1		3
F...					1			2						" "												1	1	1			
M..		2	1	2	1	2			1	1	3			Rheumatism	22	13	9			1	1		1	1	2		4	2	1		
F...		1		2	1	1	1		1	1	1			"						1	2			1				3	2		
M..	2	3		1	2	1	1	1			1	2		Scarlatina	27	14	13		1	5	5	2		1							
F...		1	2	3	3			2			1	1		"					1	7	5										
M..	1			1	1						1	1		Scrofula	12	5	7		2	2				1							
F...			2	1			1	1			2			"					2	1	1				1	1			1		
M..	1	1		1		3		1	2			1		Septicæmia	21	10	11		2						1	3		3	1		
F...		1		3	1	2	1	1	1	1				"						1	1	1	1	3	1			2			1
M..				2										Shock	6	2	4										1		1		

* Classed with males.

TABLE No. XIX.—*Continued.*

Sex.	Months. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	CAUSES OF DEATH.	Whole Number. Total.	Male.	Female.	Unknown.	Ages. Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F...	1	..	1	..	..	1	..	1	..	..	..	..	..	Shock	....	....	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....
M..	1	..	..	..	..	1	1	..	..	..	..	..	..	Spina bifida	7	3	4	....	3	....	....	....	....	....	....	....	....	....	....	....	....
F...	2	..	..	..	..	1	..	1	..	..	..	..	..	" "	....	....	....	....	3	1	....	....	....	....	....	....	....	....	....	....	....	....
M..	1	..	..	..	..	..	1	1	..	..	2	..	..	Spine disease	11	5	6	....	1	....	....	....	....	....	....	2	....	1	1	....	....
F...	..	1	..	1	1	1	..	..	..	1	1	..	..	" "	....	....	....	....	1	1	....	....	....	....	1	....	....	2	1	....	....
M..	..	..	..	..	..	..	1	..	..	..	..	..	..	Spleen, enlargement of	1	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
M..	12	12	5	11	7	9	20	15	6	14	7	8	2	Still-born	205	120	77	*8	....	....	....	....	....	....	....	....	....	....	....	....	....
F...	6	5	2	10	7	8	8	3	3	11	7	5	2	"	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
M..	..	2	..	..	..	..	2	..	..	..	2	1	..	Stomach disease	14	7	7	....	....	....	....	....	....	....	1	....	2	....	3	1	....
F...	..	..	1	..	1	2	1	..	1	..	..	1	..	" "	....	....	....	....	1	....	....	....	....	....	2	1	1	1	....	1	....
M..	..	1	..	..	..	..	..	..	..	..	..	..	..	Strangulation of bowels	1	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
M..	..	..	..	..	..	..	..	..	1	..	..	..	..	Stricture of rectum	1	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....
M..	..	..	..	..	1	..	..	..	..	..	..	..	..	Sudden death from over-	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
M..	2	1	..	..	5	1	2	3	3	2	4	2	..	Suicide [eating	28	25	3	....	....	....	....	....	....	....	2	1	1	6	7	5	2	1
F...	..	..	..	..	..	..	..	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	....	1
M..	..	..	..	..	..	..	..	2	..	..	..	..	..	Suicide by poison	5	2	3	....	....	....	....	....	....	....	....	....	....	1	1	....	....
F...	..	..	..	..	1	..	..	..	..	..	2	..	..	" "	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	1
M..	..	..	..	..	..	..	..	..	..	1	..	..	..	Suicide by drowning	2	1	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....
F...	..	..	..	..	..	..	..	..	..	..	1	..	..	"	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
M..	..	..	..	1	..	2	..	3	..	2	..	1	..	Suicide by hanging	10	9	1	....	....	....	....	....	1	....	....	3	....	2	2	....	1
F...	..	..	..	..	..	..	..	..	1	..	..	..	..	"	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....
M..	..	1	1	..	1	..	2	1	..	..	..	..	..	Suicide by shooting	6	6	....	....	....	....	....	....	....	....	2	1	2	1	....	....	....
M..	..	..	..	..	..	1	..	1	1	..	1	..	..	Syphilis	7	4	3	....	2	....	....	....	....	....	....	....	2	....	....	....	1
F...	..	1	1	..	..	..	1	..	..	..	..	..	..	"	....	....	....	....	2	....	....	....	....	....	1	....	....	....	....	....	....
M..	1	..	..	..	..	1	2	1	..	1	1	..	..	Tabes Mesenter	10	7	3	....	3	....	....	....	1	....	1	1	....	1	....	....	....
F...	..	..	1	..	..	..	1	..	..	..	1	..	..	" "	....	....	....	....	....	1	....	....	....	....	1	....	....	....	1	....	....	....
M..	..	..	1	1	1	..	..	1	..	1	1	..	..	Teething	10	6	4	....	2	4	....	....	....	....	....	....	....	....	....	....	....
F...	1	1	..	..	..	..	..	1	1	..	..	..	..	"	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....

M..			1											Tetanus	2	1	1										1				
F...								1						"							1										
M..	1	1			1									Tonsilitis	4	3	1		1		1	1									
F...	1													"														1			
F...	1				2	1		1		2		1		Tumor	8		8							1	2	1	3	1			
M..										1				" of bowels	7	1	6												1		
F...		2		1			1			1	1			" "										1				2	2	1	
M..											1			Typhlitis	2	1	1									1					
M..											2			Ulceration of bowels	4	2	2										2				
F...		1				1								" "														1	1		
M..												1		Ulcer, varicose	1	1														1	
F...	1		1	1					1					" of intestines	6	2	4							1	1			1	1		
M..							2							" "										1			1				
F...	1					3			1	1	1			" of stomach	14	7	7								2	2	1	1	1		
M..				3			2	2						" "													1	4	1	1	
M..	5	1				1	3	4	2	1		1		Unknown	17	18	9		5	1					3	2	1	2	3		1
F...	2		2		1		1	1				2		"					3						2		1	2		1	
F...			2	2	1	2	3	1			2			Uræmia	22	9	13						1	3	3		4	1		1	
M..		1	1		1		3	2		1				"												2	1	4	1	1	
F...			1	1	1	1	1							Uterus disease	5		5								2		3				
F...												1		Varicella	1		1		1												
M..	2	2	4	3	3		1	2	1	2	1			Whooping-cough	37	16	21		13	7	1										
F...	4	1	4		1		1	1	2			2		" "					11	4	1										
M..								1						Wounds, gun-shot	6	5	1					1									
F...		1		2	1					1				" "									1	2	1		1				

* Classed with males.

TABLE No. XX.

*Deaths by Sex, Age, and Months.**

MONTHS.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.	Total.
January	Males	65	42	14	18	19	32	32	56	86	141	94	13	2	11	625
	Females	47	35	8	14	28	37	51	83	86	169	129	24	.....	8	719
	Not stated	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
February	Males	47	25	5	15	20	16	20	28	49	69	43	4	.....	7	348
	Females	25	26	7	22	17	28	25	24	45	57	53	11	.....	6	346
March	Males	58	26	5	16	22	22	23	20	38	38	30	5	.....	10	313
	Females	33	27	6	12	23	31	31	27	48	42	41	8	.....	5	334
	Not stated	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
April	Males	37	13	7	11	16	18	22	25	47	59	45	3	.....	4	307
	Females	26	21	12	15	20	19	18	26	53	34	43	9	.....	4	300
May	Males	42	21	10	6	18	13	16	21	37	61	24	1	.....	8	278
	Females	35	24	9	18	34	22	19	28	18	49	25	2	.....	8	291
June	Males	39	17	8	15	10	12	20	18	38	27	19	1	.....	7	231
	Females	32	18	4	17	20	20	16	24	32	25	20	4	.....	4	236
	Not stated	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
July	Males	106	14	7	12	15	17	13	28	27	43	23	1	.....	11	317
	Females	80	22	8	16	24	26	23	22	28	18	29	4	.....	7	307
	Not stated	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
August	Males	112	24	6	13	22	16	18	23	41	32	26	3	.....	7	343
	Females	108	17	5	14	28	26	12	17	34	26	21	3	.....	5	316
	Not stated	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1

September	Males	61	23	1	13	15	14	15	16	32	33	30	3	.....	7	263
	Females	69	12	3	12	26	18	18	25	40	34	27	8	.....	1	293
	Not stated	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
October	Males	45	18	7	13	21	27	14	23	26	38	21	.....	.....	5	258
	Females	40	19	6	13	22	17	20	22	32	32	21	6	.....	3	253
November	Males	30	17	5	10	16	18	16	31	49	42	25	1	.....	6	266
	Females	16	20	12	14	29	18	14	25	29	34	26	5	1	6	249
December	Males	38	10	4	12	25	20	19	22	29	47	17	5	.....	5	253
	Females	26	9	6	10	15	13	24	26	27	33	31	5	.....	3	228
	Not stated	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
No date	Males	1	1	.....	1	.....	1	.....	1	3	1	.....	.....	.....	.....	9
	Females	2	2	.....	.....	1	.....	.....	.....	1	1	1	.....	.....	1	8
Total	Males	681	251	79	155	219	226	228	312	502	631	397	40	2	88	3,811
	Females	539	251	86	177	287	275	271	349	473	554	467	89	1	61	3,880
	Not stated	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	8

* Not including premature and still births.

SUMMARY OF REGISTRATION REPORT.

Without vital statistics it would be impossible to intelligently adopt and put into efficient execution measures for the restriction and prevention of disease, because there would be no basis of determining the necessity of action or for measuring its results. Fortunately, through the untiring efforts of several years, we have, in New Hampshire, arrived at a period of accuracy and completeness in the registration of deaths second, probably, to that of no state in the Union, and which is of great value and importance to the state from more than one stand-point.

The total number of deaths returned to the registrar of vital statistics for the year ending December 31, 1892, was 7,988. This is 678 more than was returned for the year 1891, and 1,153 more than the average for the past nine years.

This excess over the average for the years stated is not due wholly to an actual increase in death-rate, but to a more complete registration than existed during the earlier years of the period embraced in the comparison. Still it is true that the death-rate has increased,—due chiefly, it would seem, to epidemic influenza. The progressive march of this disease is indicated by the deaths attributed directly to it, as follows:

Deaths from epidemic influenza (la grippe)					1889	4
"	"	"	"	"	1890	94
"	"	"	"	"	1891	143
"	"	"	"	"	1892	331

That this malady is responsible for an increased death-rate from other diseases, there is no doubt. Pneumonia was increased from 673 deaths in 1891 to 890 in 1892. Other indications pointing to this conclusion may be seen by a careful examination of the tables presented:

TABLE No. 1.

Population of Counties in 1880 and 1890.

COUNTIES.	1880.	1890.
Rockingham	49,064	49,650
Strafford	35,558	38,442
Belknap	17,948	20,321
Carroll	18,224	18,124
Merrimack	46,300	49,435
Hillsborough	75,634	93,247
Cheshire	28,734	29,579
Sullivan	18,161	17,304
Grafton	38,788	37,217
Coös	18,580	23,211
Total	346,991	376,530

TABLE No. 2.

Population of New Hampshire for each Year from 1880 *to* 1892, *inclusive.**

YEARS.	Population.	YEARS.	Population.
1880	346,991	1887	367,728
1881	349,952	1888	370,689
1882	352,913	1889	373,650
1883	355,874	1890	376,530
1884	358,845	1891	379,491
1885	361,806	1892	382,452
1886	364,767		

*Population estimated for all but census years.

The above figures, except for census years, are estimated upon a basis of a steady increase in population in the same ratio as was shown between the census returns of 1880 and 1890. It is believed that these figures are approximately correct for the years represented.

TABLE No. 3.

Births, Marriages, and Deaths, with the Population and Rates, for 1884 *to* 1892, *inclusive.**

YEARS.	Population.	Births.	Marriages.	Deaths.	Birth-rate per 1,000.	Persons married to 1,000.	Death-rate per 1,000.
1884	358,845	6,247	3,292	6,194	17.40	18.34	17.26
1885	361,806	6,319	3,180	6,201	17.46	17.56	17.13
1886	364,767	6,657	3,324	6,426	18.24	18.22	17.61
1887	367,728	6,910	3,495	6,479	18.78	19.00	17.61
1888	370,689	6,443	3,379	6,854	17.38	18.22	18.48
1889	373,650	6,912	3,621	6,696	18.49	19.36	17.91
1890	376,530	6,946	3,621	7,368	18.44	19.22	19.56
1891	379,491	7,510	3,904	7,310	19.94	20.22	19.41
1892	382,452	7,746	4,074	7,988	20.25	21.30	20.88
Average	.....	.....	.....	.....	.....	.....	.....

* Population estimated for all but census years.

Table No. 3 shows the population of the state, the number of births, marriages, and deaths, with the birth, marriage, and death rate to each 1,000 of the population for the years 1884 to 1892, inclusive.

An average for these years is also given.

BIRTHS.

There were returned for the year 1892, 7,746 births, or 236 more than there were reported the previous year, more than was ever recorded in a single year.

The birth-rate to each 1,000 of the population for the year is 20.57.

TABLE No. 4.

Births in Cities for 1892, *with Rate per* 1,000.

CITIES.	Population of 1890.	Births.	Birth-rate per 1,000.
Portsmouth	9,827	161	16.38
Dover	12,790	296	23.14
Concord	17,004	416	24.46
Manchester	44,126	1,029	23.31
Nashua	19,311	698	36.14
Keene	7,446	150	20.14
Rochester	7,396	137	18.52
Laconia	6,143	172	27.99
Somersworth	6,207	196	31.57

The birth-rate and percentages for the several cities are given in table No. 4.

TABLE No. 5.

Percentage of American and Foreign Births, by Counties, 1892.

COUNTIES.	PARENTS.			Births with parentage not stated.
	American-born.	Foreign-born.	One foreign born.	
Rockingham	526	140	114	17
Strafford	340	344	108	16
Belknap	197	120	63	15
Carroll	212	40	33	24
Merrimack	476	341	143	28
Hillsborough	726	1,178	296	86
Cheshire	329	174	79	29
Sullivan	212	55	65	7
Grafton	430	78	84	26
Coös	198	257	120	20
Total for state	3,646	2,727	1,105	268

A statement of the births by counties for the past eleven years may be found in table I, page 4. Other facts relating to births may be found in tables III and IV.

MARRIAGES.

The number of marriages returned for the year 1892 is 4,074, the largest number ever reported in a single year, as will be seen by the following table:

TABLE No. 6.

Marriage-rates for 1882 *to* 1892, *inclusive.*

YEARS.	Marriages.	Persons married to 1,000 living.*	Number living to one marriage.
1882	3,433	19.44	103
1883	3,495	19.68	102
1884	3,292	18.34	109
1885	3,180	17.56	114
1886	3,324	18.22	109
1887	3,495	19.00	105
1888	3,379	18.22	109
1889	3,621	19.36	103
1890	3,621	19.22	103
1891	3,904	20.72	97
1892	4,074	21.30	93
Average	3,529	19.18	104

* Population estimated for all but census years.

TABLE No. 7.

Marriages by Counties from 1882 *to* 1892, *inclusive.*

COUNTIES.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Rockingham	419	399	419	447	440	457	420	484	458	507	502
Strafford	428	425	415	388	418	420	416	377	457	466	466
Belknap	166	198	147	150	183	213	183	186	178	200	208
Carroll	159	175	171	182	177	149	163	176	155	200	190
Merrimack	364	432	344	361	345	421	405	423	473	430	463
Hillsborough	1,025	949	886	815	876	915	879	1,013	939	1,043	1,252
Cheshire	232	262	238	233	240	255	221	250	237	289	269
Sullivan	149	167	138	109	140	123	146	154	172	175	152
Grafton	319	339	332	327	318	328	322	343	314	338	332
Coös	172	149	202	168	187	214	224	215	238	256	240
Total	3,433	3,495	3,292	3,180	3,324	3,495	3,379	3,621	3,621	3,904	4,074

TABLE No. 8.

Marriage-rates for 1882 *to* 1892, *inclusive, by Counties.**

COUNTIES.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Rockingham	8.51	8.09	8.49	9.04	8.89	9.22	8.45	9.72	9.22	10.21	10.08
Strafford	11.84	11.66	11.30	10.48	11.21	11.17	10.98	9.88	11.88	12.12	11.94
Belknap	9.01	10.61	7.78	7.84	9.45	10.87	9.23	9.27	8.75	9.84	10.00
Carroll	8.73	9.62	9.40	10.01	9.74	8.21	8.98	9.71	8.55	11.03	10.43
Merrimack	7.75	9.14	7.23	7.54	7.16	8.68	8.30	8.61	9.56	8.69	9.24
Hillsborough	12.95	11.73	10.72	9.65	10.17	10.41	9.80	11.08	10.07	11.18	12.93
Cheshire	8.01	9.02	8.01	7.97	8.18	8.66	7.48	8.43	8.01	9.77	9.04
Sullivan	8.28	9.27	7.74	6.14	7.93	7.00	8.35	8.86	9.93	10.11	8.44
Grafton	8.28	8.83	8.68	8.59	8.38	8.68	8.55	9.15	8.43	9.10	8.62
Coös	8.82	7.46	9.89	8.04	8.76	9.82	10.07	9.47	10.25	11.03	9.94
Average	9.72	9.84	9.17	8 78	9.11	9.50	9.11	9.68	9.61	10.31	10.58

*Population estimated for all but census years.

TABLE No. 9.

*Marriages and Marriage-rates by Months and Quarters, from 1883 to 1892, inclusive**

MONTHS.	MARRIAGES REGISTERED.											PERCENTAGE OF MARRIAGES.										
	1883.	1884.	1885.	1886.	1887.	1888.	1889	1890.	1891.	1892.	Quarters.	1883.	1884.	1885.	1886.	1887.	1888	1889.	1890.	1891.	1892.	Quarters.
January	359	270	254	252	303	284	283	309	305	285		10.38	8.25	8.02	7.61	8.74	8.45	7.87	8.53	7.84	7.06	
February	236	264	201	191	237	242	212	215	248	303	7,298	6.83	8.06	6.35	5.77	6.84	7.20	5.89	5.92	6.37	7.51	20.75
March	215	184	162	224	178	185	240	203	217	237		6.22	5.62	5.12	6.77	5.13	5.50	6.67	5.60	5.58	5.87	
April	230	231	274	212	250	259	255	295	293	313		6.65	7.05	8.65	6.40	7.21	7.71	7.09	8.14	7.53	7.76	
May	282	253	244	307	276	247	306	260	275	300	8,555	8.16	7.73	7.71	9.28	7.96	7.35	8.51	7.18	7.07	7.44	24.33
June	239	268	269	325	316	341	342	338	346	409		6.91	8.19	8.50	9.82	9.11	10.14	9.51	9.33	8.89	10.14	
July	233	242	200	223	259	205	270	230	262	268		6.74	7.39	6.32	6.74	7.47	6.10	7.61	6.35	6.74	6.64	
August	271	221	222	239	247	239	282	262	322	278	8,296	7.84	6.75	7.01	7.22	7.12	7.11	7.84	7.23	8.28	6.89	23.59
September	270	324	311	315	298	315	321	380	391	396		7.81	9.90	9.82	9.52	8.59	9.37	8.92	10.49	10.06	9.81	
October	350	332	320	343	376	377	351	360	407	441		10.12	10.14	10.11	10.36	10.84	11.22	9.76	9.94	10.49	10.93	
November	423	386	374	388	427	381	409	443	467	445	11,018	12.24	11.79	11 81	11.72	12.31	11.34	11.37	12.26	12.01	11.03	31.33
December	349	299	335	291	301	286	326	316	355	360		10.10	9.13	10.58	8.79	8.61	8.51	9.06	8.72	9.13	8.92	
Total	3,457	3,274	3,166	3,310	3,468	3,361	3,597	3,611	3,888	4,035	35,167	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Not including those with date not given.

TABLE No. 10.

Marriages for nine years, 1883 *to* 1892, *inclusive, by Ages.*

SEX.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.
Males.....	1,697	13,175	9,288	4,156	2,183	1,254	875	666	483	685	243	17	662
Females.....	9,578	13,231	5,733	2,415	1,387	836	564	377	215	234	36	1	777

TABLE No. 11.

Marriages according to Nativity.—Percentages 1882 *to* 1892, *inclusive.*

YEARS.	Both American.	Both foreign.	Groom American.	Bride American.	Not stated.
1882.....	65.74	12.09	5.13	4.14	12.90
1883.....	66.15	12.62	5.38	4.18	11.67
1884.....	69.44	12.91	5.32	3.92	8.41
1885.....	69.75	11.57	4.97	4.84	8.87
1886.....	67.87	13.39	6.50	5.08	7.16
1887.....	65.72	15.79	6.07	5.49	6.93
1888.....	64.22	17.16	7.10	6.31	5.21
1889.....	64.32	17.04	7.40	6.55	4.69
1890.....	62.19	18.58	7.53	7.15	4.53
1891.....	62.45	18.49	7.38	6.74	4.94
1892.....	59.82	21.01	7.81	6.82	4.54

TABLE No. 12.

Proportion of American to Foreign Born Persons Married, for 1882 *to* 1892, *inclusive.**

YEARS.	American-born.	Foreign-born.
1882	80.80	19.20
1883	80.30	19.70
1884	80.86	19.14
1885	81.92	18.08
1886	79.34	20.66
1887	76.82	23.18
1888	74.82	25.18
1889	74.80	25.20
1890	65.14	34.86
1891	73.12	26.87
1892	70.33	29.67

* Excluding those with nativity not stated.

TABLE No. 13.

Percentages of American and Foreign Born Persons Married, by Counties, from 1882 to 1892, inclusive.

YEARS.		State.	Rockingham.	Strafford.	Belknap.	Carroll.	Merrimack.	Hillsborough.	Cheshire.	Sullivan.	Grafton.	Coös.
1882	American	80.80	90.89	80.98	75.90	97.43	84.25	66.08	88.64	90.08	93.38	81.17
	Foreign	19.20	9.11	19.02	24.10	2.57	15.75	33.92	11.36	9.92	6.62	18.83
1883	American	80.30	89.63	82.05	82.78	94.22	84.17	62.84	89.57	96.92	89.63	75.76
	Foreign	19.70	10.37	17.95	17.22	5.78	15.83	37.16	10.43	3.08	10.37	24.24
1884	American	80.86	86.68	76.32	88.11	97.71	85.83	65.30	90.32	93.65	92.18	76.44
	Foreign	19.14	13.32	23.68	11.89	2.29	14.17	34.70	9.68	6.35	7.82	23.56
1885	American	81.92	86.95	81.25	83.58	97.26	87.09	67.52	90.05	91.33	89.63	76.60
	Foreign	18.08	13.05	18.75	16.42	2.74	12.91	32.48	9.95	8.67	10.37	23.40
1886	American	79.34	87.01	79.82	75.14	96.18	83.74	62.90	91.27	89.00	90.53	71.50
	Foreign	20.66	12.99	20.18	24.86	3.82	16.26	37.10	8.73	11.00	9.47	28.50
1887	American	76.82	87.15	75.70	78.81	93.88	80.29	60.59	82.98	93.97	88.50	66.42
	Foreign	23.18	12.85	24.30	21.29	6.12	19.71	39.41	17.02	6.03	11.50	33.58
1888	American	74.82	84.03	77.10	78.53	93.91	76.93	54.94	84.47	88.73	88.96	74.07
	Foreign	25.18	15.97	22.90	21.46	6.09	23.07	45.06	15.53	11.27	11.04	25.93

1889	American	74.80	84.85	72.41	82.56	93.39	79.90	56.96	85.99	90.00	88.84	65.17
	Foreign	25.20	15.15	27.59	17.44	6.61	20.10	43.04	14.01	10.00	11.16	34.83
1890	American	65.14	76.39	63.57	74.25	87.75	68.01	47.48	77.44	83.63	80.95	45.30
	Foreign	34.86	23.61	36.43	25.75	12.25	31.99	52.52	22.56	16.37	19.05	54.70
1891	American	73.12	82.82	76.10	76.98	86.38	73.24	57.28	82.35	83.53	88.03	65.06
	Foreign	26.87	17.17	23.89	23.02	13.61	26.75	42.72	17.65	16.47	11.97	34.94
1892	American	70.33	84.09	72.63	73.97	92.39	76.73	51.44	81.98	85.11	87.50	59.57
	Foreign	29.67	15.91	27.37	26.03	7.61	23.22	48.56	18.02	14.89	12.50	40.43

DIVORCES.

TABLE No. 14.

Divorces Decreed from 1870 to 1892, inclusive, by Counties.

COUNTIES.	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Rockingham..	19	20	29	34	41	23	37	18	30	30	44	30	23	21	28	25	40	41	26	43	42	47	33
Strafford.....	12	6	24	27	25	17	20	29	29	34	58	42	36	53	32	28	46	24	41	36	38	30	30
Belknap.....	....	7	7	13	12	10	18	16	16	16	22	17	14	15	19	20	24	25	26	27	25	37	27
Carroll.....	4	1	1	9	9	4	10	13	19	13	11	19	9	7	14	20	12	12	22	20	20	17	18
Merrimack...	15	27	32	13	51	37	40	23	22	36	41	25	49	49	48	35	46	48	49	42	53	52	55
Hillsborough.	64	37	58	51	77	75	65	73	61	69	83	87	90	74	93	86	110	78	82	87	95	115	89
Cheshire.....	12	19	19	16	15	22	21	17	18	22	31	21	34	25	30	25	32	26	29	31	32	32	32
Sullivan.....	6	6	10	16	17	13	26	9	10	8	9	22	17	12	11	20	25	20	26	18	22	13	8
Grafton.....	13	21	15	29	22	20	20	29	17	27	25	37	27	14	28	22	30	35	40	39	33	49	38
Coös.....	4	5	2	4	12	11	9	10	11	10	15	7	15	3	12	10	17	16	18	25	22	20	17
Total.....	149	149	197	212	281	232	266	237	233	265	339	307	314	273	315	291	382	325	359	368	382	412	347

TABLE No. 15.

Ratio of Divorces to Marriages from 1882 *to* 1892, *inclusive.*

YEARS.	Number of marriages.	Persons married per 1,000 population.	Number of divorces.	Ratio of divorces to marriages.
1882	3,433	19.44	214	1 to 10.93
1883	3,495	19.68	273	1 to 12.80
1884	3,292	18.34	315	1 to 10.45
1885	3,180	17.56	291	1 to 10.92
1886	3,324	18.22	382	1 to 8.70
1887	3,495	19.00	325	1 to 10.75
1888	3,379	18.22	386	1 to 8.75
1889	3,621	19.22	368	1 to 9.83
1890	3,621	19.22	382	1 to 9.48
1891	3,904	20.56	412	1 to 10.55
1892	4,074	21.30	347	1 to 11.74

Other tables relating to divorces may be found on pages 42 and 43.

TABLE No. 16.

Ratio of Divorces to Marriages, by Counties, for 1892.

COUNTIES.	Number of marriages.	Number of divorces.	Ratio of divorces to marriages.
Rockingham	502	33	1 to 15.21
Strafford	466	30	1 to 15.53
Belknap	208	27	1 to 7.70
Carroll	190	18	1 to 10.50
Merrimack	463	55	1 to 8.41
Hillsborough	1,252	89	1 to 14.10
Cheshire	269	32	1 to 8.40
Sullivan	152	8	1 to 19.00
Grafton	332	38	1 to 8.73
Coös	240	17	1 to 14.12
Total	4,074	347	1 to 11.74

TABLE No. 17.

Deaths and Death-rates from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths registered.	Deaths to 1,000 of population.	Population.*
1884	6,194	16.26	358,845
1885	6,201	17.13	361,806
1886	6,426	17.61	364,767
1887	6,479	17.61	367,728
1888	6,854	18.48	370,689
1889	6,696	17.91	373,650
1890	7,368	19.56	376,530
1891	7,310	19.41	379,491
1892	7,988	20.88	382,452
Average	6,835	18.32	.....

* Population estimated for all but census years.

Table No. 17 gives the number of deaths returned for each year from 1884 to 1892, inclusive, with percentage to each 1,000 of the estimated population.

It will be seen by this table that the death-rate per 1,000 of the population for the year 1892 is 20.88, the highest recorded during the period embraced in the table. This rate is somewhat in excess of what we believe should be maintained in this state.

TABLE No. 18.

Deaths and Death-rates, by Counties, from 1884 to 1892, inclusive.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.	
	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.
Rockingham	873	17.69	911	18.43	963	19.46	876	17.67	896	18.05	875	17.67	1,065	21.45	991	19.95	1,026	20.66
Strafford	627	17.07	619	16.73	609	16.33	673	17.91	688	18.17	691	18.11	801	20.83	809	21.04	864	22.47
Belknap	285	15.09	289	15.12	362	18.71	369	18.84	392	19.78	389	19.40	374	18.40	392	19.29	440	21.65
Carroll	333	18.31	269	14.80	303	16.68	294	16.20	328	18.08	298	16.44	303	16.71	341	18.81	342	18.87
Merrimack	736	15.48	796	16.63	833	17.29	835	17.22	920	18.86	891	18.15	983	19.88	951	19.23	1,064	21.52
Hillsborough	1,655	20.02	1,701	20.15	1,681	19.51	1,697	19.38	1,846	20.59	1,740	19.04	1,973	21.14	1,957	20.98	2,092	22.43
Cheshire	497	17.06	494	16.90	475	16.19	482	16.39	488	16.52	525	17.72	557	18.49	482	16.29	608	20.55
Sullivan	273	15.32	284	16.02	328	18.59	283	16.12	327	18.72	314	18.06	332	19.81	280	16.18	382	21.49
Grafton	652	17.06	611	16.05	616	16.24	602	15.93	655	17.35	625	16.67	651	17.49	648	17.41	749	20.01
Coös	263	12.88	227	10.87	256	12.00	368	16.89	314	14.11	348	15.32	329	14.17	459	19.77	421	18.13
Total	6,194	17.26	6,201	17.13	6,426	17.61	6,479	17.61	6,854	18.48	6,696	17.91	7,368	19.56	7,310	19.41	7,988	21.21

Table No. 18 shows the number of deaths and the death-rate per 1,000 of the population, census figures. The percentages being based upon the census returns, cannot, of course, be absolutely correct, excepting for the year 1890; therefore the total percentage for 1892 is in this table too high. The figures given in table No. 17 (20.88 per 1,000) are more nearly correct.

The highest death-rate in any county for the year 1892 is in Strafford—22.47, followed by Hillsborough 22.43, Belknap 21.65, Merrimack 21.52, Sullivan 21.49, Rockingham 20.66, Cheshire 20.55, Grafton 20.01, Carroll 18.87, Coos 18.13.

TABLE No. 19.

Percentages of Deaths, by Quarters, from 1884 *to* 1892, *inclusive.**

YEARS.	PERCENTAGES OF DEATHS FOR QUARTERS ENDING WITH			
	March.	June.	September.	December.
1884	23.23	23.40	26.63	26.74
1885	27.27	26.66	24.32	21.75
1886	23.75	23.27	28.90	24.08
1887	24.56	24.02	27.77	23.65
1888	25.94	23.72	26.82	23.52
1889	23.70	24.16	27.38	24.76
1890	28.82	21.63	26.71	22.84
1891	22.36	21.15	26.89	26.58
1892	34.97	21.41	23.99	19.63

* Not including deaths with month not stated, premature and still births.

Table No. 19 shows the percentages by quarters, from 1884 to 1892, inclusive. The variation in the percentages for 1892 from those given for the previous year is very

marked, and is due to the erratic course of the epidemic influenza. In 1891 this disease prevailed more severely in the second and fourth quarters of the year, while in 1892 its greatest mortality was in the first quarter of the year. Again in 1892 there was a great reduction in the death-rate from cholera infantum, which reduces the percentage of the third quarter below that of any previous record.

The rate for the first quarter of the year 1892 is 34.97 of the total mortality; second quarter 21.41, third quarter 23.99, fourth quarter 19.63.

TABLE No. 20.

Mortality of Males and Females compared 1884 *to* 1892 *inclusive.*

YEARS.	Male decedents.	Female decedents.	Male decedents to 100 female decedents.	Death-rate of males to 1,000 male population.	Death-rate of females to 1,000 of female population.
1884.....	3,034	3,122	97.18	17.79	17.69
1885.....	2,948	3,194	92.29	17.28	18.09
1886.....	3,155	3,212	98.20	18.50	18.20
1887.....	3,174	3,267	97.15	18.61	18.51
1888.....	3,419	3,382	101.09	20.04	19.16
1889.....	3,253	3,389	95.98	19.07	19.20
1890.....	3,692	3,624	101.87	21.65	20.53
1891.....	3,557	3,453	103.01	19.60	17.65
1892.....	3,981	3,990	99.77	21.33	21.00
Average.....	3,357	3,407	98.50	19.32	18.89

Table No. 20 exhibits the mortality of males and females compared for the years 1884 to 1892, inclusive. With the

exception of the years 1888, 1890, and 1891, the female decedents have exceeded the males. By a comparison of the death-rates of the respective sexes to each 1,000 of the living population of that sex, it will be seen that the average mortality rate of the male population is slightly higher than that of the female.

In 1892, 3,357 male decedents and 3,407 female decedents were reported.

The death-rate of males to each 1,000 of the male population was 19.32.

The death-rate of females to each 1,000 of the female population was 18.89.

TABLE No. 21.

Deaths at Age Periods, by Percentages, from 1883 *to* 1892, *inclusive.**

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	Over 60.
1883.....	14.33	7.58	2.56	5.55	8.58	6.73	6.22	7.64	37.93
1884.....	16.22	7.36	2.61	5.30	7.93	6.26	6.33	7.75	38.38
1885.....	15.98	7.14	2.11	4.42	7.50	6.71	6.71	7.76	40.09
1886.....	16.89	7.70	2.86	4.82	7.73	6.55	6.12	7.47	38.86
1887.....	17.64	7.26	2.05	4.89	6.96	6.25	6.56	7.72	39.70
1888.....	19.23	7.63	2.04	4.93	7.07	6.00	5.53	7.57	38.72
1889.....	19.44	7.71	2.66	4.64	6.56	6.15	5.93	7.63	38.40
1890.....	16.23	6.67	1.99	4.28	7.04	7.42	6.62	9.17	40.49
1891.....	18.30	7.08	2.55	4.40	6.95	6.01	6.29	8.15	40.25
1892.....	16.17	6.64	2.18	4.39	6.70	6.63	6.60	8.76	41.77

* Not including those with age not stated, premature and still births.

Table No. 21 is interesting in showing how uniformly the mortality by age periods occurs, even when distributed

over a series of years. It will be seen that nearly one fourth of all the decedents are under five years of age—a fact to which the eyes of all who are interested in the welfare of the race should be directed. Many of the causes which contribute to such a fearful mortality among children might be avoided by concerted public action in supporting remedial and preventive measures. In this special field there remains much to be done by the sanitarian and the health officer.

TABLE No. 22.

Deaths at Different Periods, compared with the number Living at the Same Period, 1892.*

	Deaths, 1892.	Persons living at same ages, census of 1880.	Death-rate per 1,000.
Under one year	1,225	6,141	199.47
Under five years	1,727	30,573	56.47
Twenty to thirty years	506	63,252	7.99
All others	5,466	253,166	21.59
All ages	7,699	376,530†	20.44

* Excluding still births and premature births. † Census of 1890.

Table No. 22 exhibits the number of deaths at different age periods compared with the number living at the same period, based upon the census of 1880, with the exception noted in the table. This table shows a death-rate per 1,000 of the population under one year of age of 199.47 as against 205.82 for the preceding year; and under five years of age, 56.47 as against 57.34 for 1891; between twenty and thirty, 7.99 in 1892, and 7.71 in 1891—practically the same; all others, 21.59 in 1892 and 18.90 in 1891; for all ages, the rate was 20.44 in 1892, and 18.65 the preceding year.

The difference in the death-rate between table No. 17 (20.88) and that of table No. 22 (20.44) is due to the exclusion of still births and premature births from the latter, while the former includes both.

Table No. 23 shows the number of deaths at different age periods by sex, from 1884 to 1892, inclusive. In the year 1892 there were returned 1,225 deaths of children under one year of age, not including still births and premature births; 502 between one and five; 165 between five and ten; 332 between ten and twenty; 506 between twenty and thirty; 501 between thirty and forty; 499 between forty and fifty; 661 between fifty and sixty; 975 between sixty and seventy; 1,185 between seventy and eighty; 864 between eighty and ninety; 129 between ninety and one hundred; 6 over one hundred; and 149 with age not stated.

Seventeen hundred and twenty-seven children died during the year before reaching five years of age—nearly a quarter of the total mortality of the state!

TABLE No. 23.

*Deaths by Ages and Sex, from 1884 to 1892, inclusive.**

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1884....Males	460	243	72	136	224	168	180	245	322	502	292	30	1	60
Females	353	212	90	192	266	220	211	235	336	444	379	70	.....	51
Not stated	3	1	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	4
Total	816	456	162	328	491	388	392	480	659	946	671	100	1	115
1885....Males	416	225	62	109	190	181	190	252	394	478	284	32	1	43
Females	371	217	68	164	275	235	226	225	355	463	398	74	2	50
Not stated	18	1	1	1	.....	.....	.....	4	2	3	.....	.....	.....	5
Total	805	443	131	274	465	416	416	481	751	944	682	106	3	98
1886....Males	487	273	94	132	205	188	198	228	368	499	317	42	2	33
Females	385	221	90	178	292	233	195	252	339	447	397	83	3	28
Not stated	19	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Total	891	495	184	310	497	421	393	480	707	946	714	125	5	64
1887....Males	490	231	71	142	196	184	186	254	377	512	336	45	1	34
Females	416	239	61	175	255	221	239	246	358	494	350	93	6	28
Not stated	8	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total	914	470	133	317	451	405	425	500	735	1,006	686	138	7	63
1888....Males	588	280	75	144	213	177	180	257	392	507	377	47	1	53
Females	459	243	65	194	271	241	199	262	375	511	360	79	5	21
Not stated	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total	1,060	523	140	338	484	418	379	519	767	1,018	737	126	6	87

TABLE No. 23.—*Continued.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1889....Males	536	269	90	131	187	186	175	241	381	492	342	43	.....	29
Females	470	245	88	179	251	226	222	270	398	471	366	75	3	29
Not stated	8	2	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Total	1,014	516	178	311	439	412	397	511	779	963	708	118	3	59
1890....Males	609	250	73	143	229	242	220	308	422	576	368	52	.....	59
Females	524	216	66	156	263	277	242	332	399	513	406	86	5	44
Not stated	13	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	10
Total	1,146	468	139	299	492	519	462	640	821	1,090	774	138	5	113
1891....Males	703	256	86	134	248	206	210	279	438	530	346	52	.....	69
Females	551	231	90	170	232	208	225	284	395	507	412	97	3	48
Not stated	10	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Total	1,264	489	176	304	480	415	435	563	833	1,037	758	149	3	118
1892....Males	681	251	79	155	219	226	228	312	502	631	397	40	2	88
Females	539	251	86	177	287	275	271	349	473	554	467	89	1	61
Not stated	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Total	1,225	502	165	332	506	501	499	661	975	1,185	864	129	6	149

* Excluding still births and premature births.

TABLE No. 24.

*Percentages of Deaths by Ages and Sex to total Mortality, from 1884 to 1892, inclusive.**

YEARS.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
1884	Males	16.00	8.45	2.51	4.73	7.79	5.84	6.26	8.52	11.20	17.46	10.16	1.04	.04
	Females	11.74	7.05	2.99	6.38	8.84	7.31	7.02	7.81	11.17	14.76	12.60	2.33	.....
	Total	13.82	7.73	2.75	5.57	8.33	6.60	6.65	8.16	11.18	16.08	11.41	1.70	.02
1885	Males	14.78	8.00	2.20	3.87	6.75	6.43	6.75	8.96	14.00	16.99	10.09	1.14	.04
	Females	12.07	7.06	2.21	5.34	8.95	7.65	7.35	7.32	11.55	15.07	12.95	2.41	.07
	Total	13.37	7.51	2.21	4.64	7.95	7.07	7.07	8.10	12.72	15.98	11.58	1.80	.05
1886	Males	16.06	9.00	3.10	4.35	6.75	6.20	6.53	7.52	12.13	16.45	10.45	1.39	.07
	Females	12.36	7.10	2.89	5.71	9.37	7.48	6.26	8.09	10.88	14.35	12.74	2.67	.10
	Total	14.18	8.04	2.99	5.04	8.08	6.85	6.39	7.81	11.50	15.39	11.62	2.03	.08
1887	Males	16.20	7.64	2.35	4.69	6.48	6.08	6.15	8.40	12.46	16.92	11.11	1.49	.03
	Females	13.19	7.58	1.94	5.55	8.09	7.01	7.58	7.80	11.35	15.67	11.10	2.95	.19
	Total	14.67	7.61	2.14	5.13	7.30	6.56	6.88	8.09	11.90	16.28	11.10	2.23	.11
1888	Males	18.16	8.65	2.31	4.45	6.58	5.47	5.56	7.94	12.10	15.66	11.64	1.45	.03
	Females	14.06	7.45	1.99	5.94	8.30	7.38	6.10	8.03	11.49	15.66	11.03	2.42	.15
	Total	16.10	8.04	2.15	5.20	7.44	6.43	5.83	7.98	11.80	15.66	11.34	1.94	.09

TABLE No. 24.—*Continued.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
1889.....Males.....	17.44	8.75	2.93	4.26	6.09	6.05	5.70	7.84	12.40	16.01	11.13	1.40	.....
Females.....	14.40	7.51	2.70	5.48	7.69	6.92	6.80	8.27	12.20	14.43	11.21	2.30	.09
Total.....	15.88	8.11	2.81	4.89	6.91	6.50	6.27	8.06	12.29	15.20	11.17	1.86	.05
1890.....Males.....	17.44	7.15	2.09	4.09	6.55	6.93	6.30	8.82	12.08	16.49	10.54	1.49	.....
Females.....	15.03	6.19	1.89	4.47	7.54	7.94	6.94	9.52	11.45	14.72	11.65	2.46	.14
Total.....	16.23	6.67	1.99	4.28	7.04	7.43	6.62	9.17	11.76	15.60	11.09	1.97	.07
1891.....Males.....	20.15	7.34	2.47	3.84	7.11	5.91	6.02	8.00	12.56	15.15	9.92	1.49	.....
Females.....	16.18	6.78	2.61	4.99	6.81	6.11	6.61	8.34	11.60	14.88	12.09	2.85	.08
Total.....	18.19	7.06	2.55	4.41	6.96	6.01	6.31	8.16	12.08	15.04	10.99	2.16	.04
1892.....Males.....	18.29	6.74	2.12	4.16	5.88	6.07	6.12	8.38	13.48	16.94	10.66	1.07	.05
Females.....	14.11	6.56	2.25	4.63	7.51	7.20	7.09	9.13	12.38	14.50	12.22	2.33	.02
Total.....	16.17	6.64	2.18	4.39	6.70	6.63	6.60	8.76	12.91	15.69	11.44	1.70	.03

* Excluding those with age and sex not stated, and premature and still births.

Table No. 24 shows the percentages of death, by age periods and sex, to the total mortality from 1884 to 1892, inclusive. Tables 24 and 25 are interesting and instructive inasmuch as they give the number of deaths and the percentage to the total mortality by age periods, for the eight years embraced in the tables.

Table No. 24 presents another graphic view of the slaughter of the innocents. The fearful mortality of early childhood is vividly illustrated in the first two columns of percentages. It is in tables like these that statistics reveal the terrible truth, and without which we would be ignorant of the true facts.

TABLE No. 25.

Deaths of Children under Five Years of Age, by Seasons, 1892.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months	190	123	145	97	122	108	223	261	165	122	83	84
Quarters		458			327			649			289	
Percentages		26.58			18.98			37.66			16.78	
Half-years			785						938			
Percentages			45.56						54.44			
Total deaths						1,723						

* Not including deaths with month not stated, premature and still births.

This table represents the mortality of children under five years of age, by seasons, for the year 1892. The greatest mortality of the year occurred in the quarter embracing the months of July, August, and September, and was 37.66 per cent. of the total mortality among children, as against 26.58 per cent. for the first quarter, 18.98 per cent. for the second, and 16.78 per cent. for the last quarter of the year.

There were 1,727 deaths among children under five years of age during the year, four with month not stated not appearing in table No. 26.

For the year 1891 the percentages were as follows: First quarter, 17.73; second quarter, 18.02; third quarter, 41.72; last quarter, 22.51.

TABLE No. 26.

Total Deaths by Seasons, 1892.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months	1,345	694	648	607	569	469	625	660	558	511	515	481
Quarters		2,687			1,645			1,843			1,507	
Percentages		34.97			21.41			23.99			19.63	
Half-years			4,332						3,350			
Percentages			56.38						43.62			
Total deaths						7,682						

* Not including deaths with month not stated, premature and still births.

Table No. 26 gives the total number of deaths at all ages, by seasons, for the year 1892. There was a total of 7,682 deaths, not including those with month not stated, premature and still births. The greatest mortality was in the month of January, 1,345, and the least in June, 469. The percentages, by quarters, were as follows: First quarter, 34.97; second quarter, 21.41; third quarter, 23.99; last quarter, 19.63.

The percentage for the first half of the year is 56.38; for the last half, 43.62.

The heavy percentage for the first quarter is due to epidemic influenza which prevailed severely during that period.

TABLE No. 27.

Nativity of Persons Deceased for 1892, *by Counties.*

COUNTIES.	Total deaths.*	NATIVE BORN.		FOREIGN BORN.	
		Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	1,026	832	89.75	95	10.25
Strafford	864	681	84.39	126	15.61
Belknap	440	329	92.41	27	7.59
Carroll	342	269	95.39	13	4.61
Merrimack	1,064	883	90.29	95	9.71
Hillsborough	2,092	1,468	78.92	392	21.08
Cheshire	608	497	90.36	53	9.64
Sullivan	382	322	89.94	36	10.06
Grafton	749	607	94.11	38	5.89
Coös	421	267	81.90	59	18.10
Total	7,988	6,155	86.82	934	13.18

* Including those whose nativity was not recorded. In the calculations of percentages, the rates are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table No. 27 gives the nativity of the decedents for the year 1892, together with the percentages of each, by counties. The greatest number of foreign-born decedents, as well as the highest rate, was in Hillsborough county, where there is a larger foreign-born population, being 392 or 21.08 per cent. Coös follows with 18.10, Strafford 15.61, Rockingham 10.25, Sullivan 10.06, Cheshire 9.64, Merrimack 9.71, Belknap 7.59, Grafton 5.89, Carroll 4.61.

The total foreign-born decedents for the state was 934,

a rate of 13.18. This rate for the previous year was 13.47, and for 1890 13.55. The uniformity of percentages for the three years given is noticeable.

TABLE No. 28.

Nativity of Persons Deceased from 1884 *to* 1892, *inclusive.*

YEARS.	Total deaths.*	NATIVE BORN.		FOREIGN BORN.	
		Deaths.	Percentages.	Deaths.	Percentages.
1884	6,194	4,868	89.01	601	10.99
1885	6,201	4,847	89.35	578	10.65
1886	6,426	4,989	88.52	647	11.48
1887	6,479	5,131	88.03	698	11.97
1888	6,854	5,449	87.53	776	12.47
1889	6,696	5,383	88.00	734	12.00
1890	7,368	5,672	86.45	889	13.55
1891	7,310	5,637	86.52	878	13.47
1892	7,988	6,155	86.82	934	13.17

*Including those whose nativity was not recorded. In the calculations of percentages, the ratios are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table No. 28 shows the number of native and foreign-born decedents in the state for each year from 1884 to 1892, inclusive, with percentages of each.

Of a total of 7,988 deaths in the state returned for the year 1892, 6,155, or 86.82 per cent., were native-born, and 934, or 13.17 per cent., foreign-born.

TABLE No. 29.

Deaths in 1892 *of Persons Aged One Hundred Years, or more.*

NAME.	Date of death.	AGE.			Place of death.	Birthplace.	Single, married, or widowed.
		Years.	Months.	Days.			
Mitchel Rivers	January 20	106	6	.....	Hillsborough	Scotland	Married.
Aaron Nichols	January 27	100	8	21	Bow	Bow	Widowed.
Parkman Brooks	February 12	100	.....	.....	No. Charlestown	.....	Married.
Hugh Rogers	March 4	100	.....	.....	Dover	Ireland	Widowed.
Amy Sawyer	November 26	103	.....	.....	Barrington	Barrington	Widowed.

TABLE No. 30.

Causes of Death, by Classes, from 1884 *to* 1892, *inclusive.*

	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
I.—Zymotic diseases	907	890	1,095	1,073	1,097	1,172	1,155	1,301	1,344
II.—Constitutional diseases	1,276	1,271	1,284	1,222	1,200	1,114	1,309	1,095	1,167
III.—Local diseases	2,594	2,637	2,610	2,731	2,994	2,852	3,146	3,149	3,531
IV.—Developmental diseases	857	848	948	952	1,016	1,041	1,150	1,141	1,057
V.—Violent deaths	201	225	206	218	234	233	271	271	283

There were returned for the year 1892, 7,988 deaths, of which 3,981 were males, 3,990 females, and 17 with sex not stated.

Table No. 31 gives the causes of deaths, by classes, for the years 1884 to 1892, inclusive.

There were attributed to the zymotic diseases 1,344 deaths; constitutional diseases, 1,167; local diseases, 3,531; developmental diseases, 1,057; and to violent deaths, 283. There was a marked increase of deaths in the local diseases over the number reported in 1891.

TABLE No. 31.

Percentage of Causes of Death, by Classes, from 1884 *to* 1892, *inclusive.**

YEARS.	CLASSES.				
	Zymotic.	Constitutional.	Local.	Developmental.	Violent deaths.
1884	15.9	22.4	45.7	12.3	3.5
1885	13.9	22.2	46.0	12.2	3.6
1886	18.2	21.4	43.4	13.4	3.4
1887	17.9	20.4	45.7	12.1	3.6
1888	17.4	19.1	47.6	12.0	3.7
1889	19.1	18.2	46.5	12.3	3.8
1890	17.0	19.3	46.5	13.1	4.0
1891	19.5	16.4	47.2	12.8	4.0
1892	18.9	16.4	49.7	10.8	4.0

* Excluding deaths from unspecified causes, premature and still births.

Table No. 32 gives the percentages of causes of death, by classes, excluding deaths from unspecified causes, premature and still births, from the year 1884 to 1892, inclusive. This table presents substantially the same information as table No. 31, but in the form of percentages. The relative fatality of each class of diseases is vividly shown. The increase of the percentage of deaths from local diseases during the period included in the table as well as the decrease of developmental diseases is especially marked.

TABLE No. 32.

Causes of Death, by Classes and Counties, 1892.

COUNTIES.	Zymotic.		Constitutional.		Local.		Developmental.		Violent.		Unspecified.		Total.
	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	
Rockingham	152	14.81	187	18.22	446	43.49	132	12.86	42	4.09	67	6.53	1,026
Strafford	152	17.59	131	15.16	375	43.40	118	13.66	32	3.71	56	6.48	864
Belknap	96	21.82	61	13.86	193	43.86	55	12.50	18	4.09	17	3.86	440
Carroll	38	11.11	56	16.34	180	52.63	30	8.77	11	3.21	27	7.89	342
Merrimack	165	15.51	160	15.04	484	45.44	154	14.47	49	4.60	52	4.89	1,064
Hillsborough	368	17.59	282	13.48	830	39.67	297	14.15	59	2.82	256	12.24	2,092
Cheshire	101	16.61	86	14.14	282	46.38	71	11.68	28	4.60	40	6.58	608
Sullivan	69	18.06	48	12.57	210	54.97	38	9.95	4	1.05	13	3.40	382
Grafton	111	14.81	97	12.95	371	49.53	103	13.75	24	3.20	43	5.74	749
Coös	92	21.85	59	14.01	160	38.00	59	14.01	16	3.80	35	8.31	421
Total	1,344	16.83	1,167	14.61	3,531	44.20	1,057	13.23	283	3.54	606	7.59	7,988

Table No. 32 gives the causes of death, by classes and counties, for 1892, with the percentages of each to the total number of deaths, and including deaths from unspecified causes, premature and still births, which accounts for the differences in the percentages in tables 31 and 32; the former gives the percentage of each class to the total number of specified causes, excluding premature and still births, while the latter gives the percentage of each class to the total number of all classes.

The highest percentage in the zymotic class is in Coös county, 21.85; Belknap, 21.82; Sullivan, 18.06; Hillsborough and Strafford, each 17.59; Cheshire, 16.61; Merrimack, 15.51; Rockingham and Grafton, each 14.81; Carroll, 11.11. The percentage of deaths in this class for the entire state is 16.83 to the total mortality, as against 17.79 for 1891.

In the constitutional class the variation of percentages is not so marked, the highest being 18.22 in Rockingham county, followed by 16.34 in Carroll, 15.16 in Strafford, 15.04 in Merrimack, 14.14 in Cheshire, 14.01 in Coös, 13.86 in Belknap, 13.48 in Hillsborough, 12.95 in Grafton, and 12.57 in Sullivan. The percentage for the whole state is 14.61, and for the previous year 17.76.

In the class of local diseases the rates are as follows: Sullivan, 54.97; Carroll, 52.63; Grafton, 49.53; Cheshire, 46.38; Merrimack, 45.44; Belknap, 43.86; Rockingham, 43.49; Strafford, 43.40; Hillsborough, 39.67; Coös, 38.00. Average for the state in this class, 44.20. In the developmental class the average rate is 13.23, the highest being 14.47 in Merrimack county, and the lowest 8.77 in Carroll county. There were 283 deaths from violent causes, and 606 from unspecified causes.

Table No. 33 shows the mortality from prominent zymotic causes. Cholera infantum heads this list, but it will be noticed that there were 120 deaths less from this cause in 1892 than in the preceding year. Croup, with 45

deaths, shows a lower mortality than for any of the years included in the table. Diphtheria, with 134 deaths for 1892, is the lowest recorded since 1885. The same is true of dysentery.

Typhoid fever was responsible for 109 deaths, which is considerably less than ever before recorded in New Hampshire in a single year.

Deaths from whooping cough, measles, and scarlet-fever, show an increase over the preceding year.

The total number of deaths from zymotic diseases, 942, is the lowest figure reached since 1885.

TABLE No. 33.

Mortality from Prominent Zymotic Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.												
	Cholera infantum.	Croup.	Diarrhea.	Diphtheria.	Dysentery.	Erysipelas.	Fever, cerebro-spinal.	Fever, typhoid.*	Measles.	Pertussis.	Scarlatina.	Septicæmia.	Total.
1884.....	266	49	53	110	80	19	25	137	3	14	52	27	835
1885.....	219	74	59	78	40	25	20	136	45	25	53	38	812
1886.....	362	64	38	156	79	18	26	194	18	26	21	27	1,029
1887.....	336	84	38	177	53	20	34	134	39	21	26	30	992
1888.....	370	94	50	103	63	36	34	150	55	23	34	29	1,041
1889.....	353	88	68	210	67	27	25	161	16	47	18	29	1,109
1890.....	399	64	50	164	48	29	....	143	9	26	16	57	1,005
1891.....	486	56	46	160	51	43	....	170	19	27	13	38	1,109
1892.....	366	45	53	134	42	39	19	109	24	37	27	47	942
Average	348	69	51	144	58	28	20	148	25	27	29	36	986

* Including fever, bilious, intermittent, malarial, and typho-malarial fevers.

TABLE No. 34.

Mortality from Principal Constitutional Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.										
	Dropsy.	Anæmia.	Cancer.	Mortification.	Rheumatism.	Scrofula.	Tabes mesenterica.	Phthisis (pulmonary).	Hydrocephalus.	Tubercular meningitis.	Total.
1884	80	43	213	18	26	26	4	865	27	*	1,302
1885	90	32	212	24	28	22	2	857	25	*	1,292
1886	83	28	206	27	47	16	11	809	33	19	1,279
1887	79	17	218	29	47	16	7	766	23	16	1,218
1888	75	34	203	22	43	21	14	742	30	13	1,197
1889	62	40	213	21	43	22	13	651	21	24	1,110
1890	53	28	276	33	30	15	6	825	13	30	1,309
1891	41	41	213	2	24	11	19	695	22	15	1,083
1892	43	35	235	24	25	17	10	736	16	24	1,165
Average	67	33	221	22	35	18	10	772	23	20	1,217

* Not classed separately.

The mortality from the chief constitutional diseases from 1884 to 1892, inclusive, is shown in table No. 34.

The total number of deaths recorded in this class for the year 1892 is 1,165, of which pulmonary tuberculosis is responsible for 736.

The uniformity of the number of deaths from cancer for the past nine years, the period covered by the table, is striking.

TABLE No. 35.

Mortality from Principal Local Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.													
	Apoplexy.	Paralysis.	Convulsions.	Cephalitis.*	Brain disease.	Heart disease.	Bronchitis.	Pneumonia.	Enteritis.	Gastritis.	Peritonitis.	Liver disease.	Bright's disease, nephritis, and other kidney diseases.	Total.
1884	192	248	99	120	134	507	78	436	69	44	61	63	140	2,191
1885	206	278	93	133	122	489	112	504	57	49	44	63	157	2,307
1886	220	249	71	141	127	510	81	466	53	66	48	71	143	2,246
1887	210	253	64	117	121	552	114	556	57	54	48	69	163	2,384
1888	243	273	88	143	112	575	142	628	39	51	63	72	154	2,634
1889	259	196	76	151	126	564	127	582	56	42	57	56	200	2,492
1890	263	251	65	186	140	568	194	703	63	60	51	56	201	2,801
1891	283	241	78	161	130	572	180	673	73	47	68	55	182	2,743
1892	308	209	78	188	140	571	217	890	72	68	94	48	222	3,105
Average	242	244	79	149	128	545	138	604	60	53	59	61	173	2,544

* Meningitis and cerebritis included.

Table No. 35 gives the mortality from the principal local diseases from 1884 to 1892, inclusive. The annual average for the eight years is 2,544, the total for 1892 being 3,105, as against 2,743 in 1891. An almost startling feature of this table is the large increase in the number of deaths from pneumonia, not only over the previous year, but for the entire period represented.

There were 890 deaths from pneumonia, 571 from heart

disease, 308 from apoplexy, 217 from bronchitis, 209 from paralysis, 188 from cephalitis, 222 from Bright's disease, 140 from brain diseases, 94 from peritonitis, 78 from convulsions, 72 from enteritis, 68 from gastritis, 48 from liver disease.

TABLE No. 36.

Mortality from Principal Developmental Diseases from 1884 *to* 1891, *inclusive.*

YEARS.	DISEASES.									
	Still born.	Debility, infantile.	Debility, premature birth.	Malformation.	Teething.	Innutrition.	Childbirth.	Old age.	Atrophy and debility.	Total.
1884.....	156	*	35	13	19	*	27	457	144	851
1885.....	145	*	39	13	13	*	31	420	167	828
1886.....	140	68	54	12	16	50	30	468	98	936
1887.....	166	56	63	10	20	76	27	449	78	945
1888.....	189	91	69	19	20	81	20	407	112	1,008
1889.....	220	79	68	24	18	63	27	426	104	1,029
1890.....	197	113	65	11	15	95	28	410	204	1,138
1891.....	213	104	73	18	14	90	23	385	208	1,128
1892.....	205	101	82	21	11	81	19	441	75	1,036
Average.....	189	87	61	17	16	77	26	429	132	989

* Classed with atrophy and debility.

Table No. 36 shows the number of decedents from the principal developmental diseases for the nine years given.

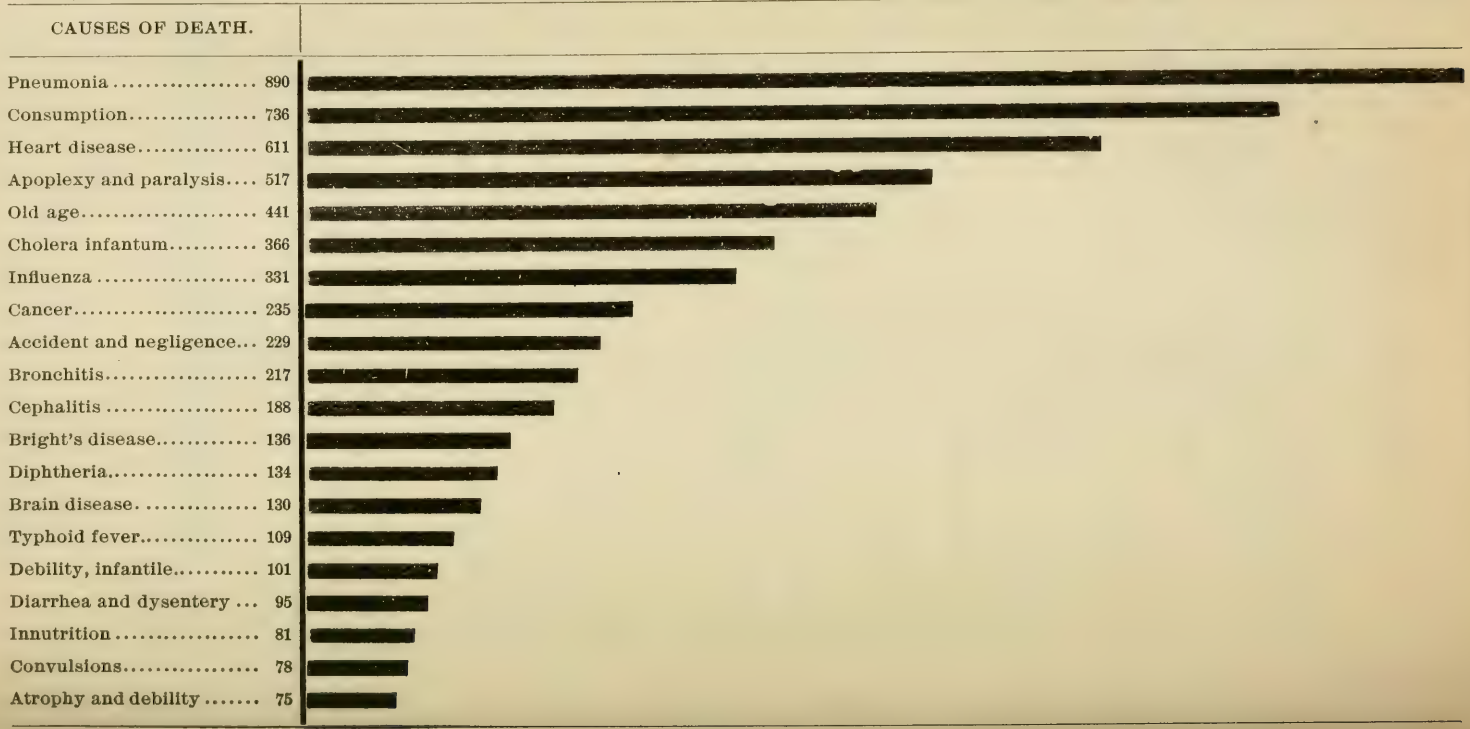
TABLE No. 37.

Mortality from Twenty Prominent Causes from 1884 *to* 1892, *inclusive.*

CAUSES OF DEATH.	Deaths in 1892.	ORDER OF FATALITY.								
		1892	1891	1890	1889	1888	1887	1886	1885	1884
Consumption	736	2	1	1	1	1	1	1	1	1
Pneumonia	890	1	2	2	2	2	3	5	2	5
Heart disease	611	3	3	3	3	3	2	2	4	2
Apoplexy and paralysis	517	4	4	4	4	4	4	3	3	4
Old age	441	5	6	5	5	5	5	4	5	3
Cholera infantum	366	6	5	6	6	6	6	6	6	6
Cancer	235	8	8	7	7	7	7	7	7	7
Diphtheria	134	13	13	12	8	15	9	10	18	13
Accident and negligence	229	9	7	8	9	8	8	9	8	11
Typhoid fever *	109	15	11	13	10	9	10	8	9	10
Cephalitis †	188	11	12	11	11	10	12	11	10	12
Diarrhea and dysentery	95	17	18	17	12	12	14	13	15	9
Bright's disease	136	12	14	16	13	20	15	15	14	14
Bronchitis	217	10	10	10	14	11	13	17	12	17
Brain disease	130	14	16	14	15	13	11	12	11	8
Atrophy and debility	75	20	9	9	16	14	18	14	13	18
Croup	45	21	21	21	17	16	16	21	19	22
Debility, infantile	101	16	17	15	18	17	23	22	‡	....
Convulsions	78	19	20	20	19	18	21	19	16	15
Innutrition	81	18	19	18	20	19	19	23	‡	....
Influenza	331	7	15	19	....	....	....	....	....	....

* Fever, bilious fever, malarial, intermittent, and typho-malarial fevers included. † Meningitis and cerebritis included. ‡ Classed with atrophy and debility.

DIAGRAM No. 1.—SHOWING THE COMPARATIVE MORTALITY, BY ABSOLUTE NUMBER OF DECEDENTS FROM TWENTY PROMINENT CAUSES OF DEATH DURING YEAR ENDING DECEMBER 31, 1892.



CONSUMPTION (PULMONARY TUBERCULOSIS).

Table No. 37 gives a comparative view of the twenty most prominent causes of death for the past nine years—from 1884 to 1892, inclusive,—diagram No. 1 shows the relative mortality from the same causes for the year 1892. Heretofore in both tables and diagrams, consumption has stood at the head in the magnitude of mortality, but this year it is outstripped by pneumonia. This is not because the former disease has been diminished, but because pneumonia has very largely increased, as will be seen by reference to other tables.

The average number of deaths from pulmonary phthisis for the past nine years is 772, annually, while for the year 1892 it is 736, thirty-six below the average, but forty-one more than was recorded the previous year. It appears from a study of table No. 18, that the disease is being somewhat reduced, although there are too many factors entering into the statistics of this malady to make the conclusion a positive one in so short a period as nine years.

The following table (No. 38) illustrates the comparative mortality of pulmonary phthisis for the period mentioned:

TABLE No. 38.

Mortality from Consumption from 1884 *to* 1892 *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rate per 10,000 living population.
1884	865	14.01	24.18
1885	857	13.82	23.68
1886	809	12.58	22.17
1887	766	11.82	20.82
1888	742	10.82	20.01
1889	651	9.72	17.42
1890	825	11.19	21.91
1891	695	9.51	18.31
1892	736	9.21	19.24

The mortality from consumption, the percentage of the same to the total mortality, and the rate per 10,000 of the population, is shown in the above table, for the years 1884 to 1892, inclusive.

Table No. 39 shows the mortality from this disease, for the same period by counties, with percentages to the total mortality.

For 1892 the rates are as follows: Rockingham 12.96, Carroll 10.53, Strafford 9.72, Merrimack 9.40, Cheshire 9.21, Hillsborough 8.36, Belknap 7.95, Grafton 7.77, Coös 7.60, Sullivan 7.07.

The average for the state is 9.21.

TABLE No. 39.

Mortality from Consumption, by Counties, with Per centages of Deaths to Total Mortality, from 1884 to 1892, inclusive.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	130	14.89	134	14.70	142	14.74	130	14.84	96	10.71	88	10.05	134	12.58	85	8.57	133	12.96
Strafford	105	16.74	96	15.50	96	15.76	80	11.88	93	13.51	75	10.85	117	14.60	94	11.62	84	9.72
Belknap	54	18.94	50	17.30	37	10.22	48	13.00	46	11.73	42	10.79	40	10.69	44	11.23	35	7.95
Carroll	46	13.81	33	12.26	41	13.53	33	11.22	26	7.92	29	9.73	25	8.25	32	9.38	36	10.53
Merrimack	91	12.36	102	12.81	79	9.48	96	11.49	101	10.97	88	9.87	114	11.59	89	9.36	100	9.40
Hillsborough	229	13.83	233	13.69	218	12.96	179	10.55	209	11.32	168	9.64	204	10.33	197	10.06	175	8.36
Cheshire	62	12.47	75	15.18	60	12.63	50	10.37	47	9.63	53	10.09	51	9.15	49	10.16	56	9.21
Sullivan	36	13.18	36	12.67	45	13.72	32	11.30	36	11.00	28	8.91	32	9.63	20	7.15	27	7.07
Grafton	83	12.73	70	11.45	72	11.72	80	13.28	63	9.61	58	9.27	70	10.75	57	8.79	58	7.77
Coös	32	12.16	28	12.33	19	7.42	38	10.32	25	7.96	22	6.32	38	11.51	28	6.10	32	7.60
Total	868	14.01	857	13.82	809	12.58	766	11.82	742	10.82	651	9.72	825	11.19	695	9.51	736	9.21

TABLE No. 40.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Manchester.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	9	9	11	4	9	6	11	7	4	5	12	3				
Quarters	29			19			22			20			91			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	3	4	12	25	24	10	7	5	1							
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	42	44	5
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	..	..	..
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49	..	..	..

Percentage to total mortality of city, 8.77.

Table No. 40 gives the deaths from consumption by months, seasons, ages, and nativity in the city of Manchester for 1892. Total number of deaths from this cause for the year was 91 as against 98 in 1891. Of these 42 were males and 49 females; 42 were American-born, 44 foreign-born, and 5 nativity not stated.

The greatest fatality was in November, 12; July and March, each 11; January, February, and May, each 9; August, 7; June, 6; October, 5; December, 3.

Three of the decedents were under 10 years of age; 4 between 10 and 15; 12 between 15 and 20; 25 between 20 and 30; 24 between 30 and 40; 10 between 40 and 50; 7 between 50 and 60; 5 between 60 and 70; 1 between 70 and 80.

TABLE No. 41.

Deaths from Pulmonary Consumption by Seasons, Ages, and Nativity, 1892, for the City of Concord.

Months	January.	February.	March.	April.	May.	June.	July.	August.	Septiember.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	2	2	4	3	1	2	5	3	1	6	4	2				
Quarters	8			6			9			12			35			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	4		2	8	8	6	2	2	3							
Nativity	.....			.....			.....			.....			....	28	3	4
Males	.....			.....			.....			.....			22	..	..	..
Females	.....			.....			.....			.....			13	..	..	..

Percentage to total mortality of city, 8.43.

Table No. 41 is a record of consumption in the city of Concord for the year 1892. There were 35 deaths from this disease—22 males and 13 females; 28 American-born, 3 foreign-born, and 4 with nativity not stated. The mortality by months was as follows: October, 6; July, 5; March and November, each 4; April and August, each 3; January, February, June, and December, each 2; May and September, each 1.

Four decedents were under 10 years of age; 2 between 15 and 20; 18 between 20 and 30; 8 between 30 and 40; 6 between 40 and 50; 2 between 50 and 60; 2 between 60 and 70; 3 between 70 and 80.

TABLE No. 42.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Nashua.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	1	1	6		3	2	1	3	1	3	2	3				
Quarters	8			5			5			8			26			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	1		1	12	5	4		1			2					
Nativity	.....			.....			.....			.....			....	13	7	6
Males	.....			.....			.....			.....			10	..	..	..
Females	.....			.....			.....			.....			16	..	..	..

Percentage to total mortality of city, 6.46.

This table is a record of the same disease in the city of Nashua for the year 1892, the total number being 26—10 males and 16 females; 13 American-born, 7 foreign-born, and 6 not stated.

Six died in March; 3 each in May, August, October, and December; 2 each, in June and November; 1 each, in January, February, July, and September.

One of the decedents was under 10 years of age; 1 between 15 and 20; 12 between 20 and 30; 5 between 30 and 40; 4 between 40 and 50; 1 over 60; and 2 age not stated.

TABLE No. 43.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Portsmouth.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	1	3	4	3	2	3	4	2	2	6	2	5				
Quarters	8			8			8			13			37			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
		1	3	15	5	3	3	5		1	1					
Nativity													....	26	10	1
Males													18	..	..	..
Females													19	..	..	..

Percentage to total mortality of city, 17.62.

The mortality from consumption in the city of Portsmouth for the year 1892 was 37, as against 17 reported the previous year—18 males and 19 females. In October there were 6 deaths; in December, 5; in March and July, 4 each; in February, April, and June, 3 each; in May, August, September, and November, 2 each; in January, 1.

One of the decedents was between 10 and 15 years of age; 3 between 15 and 20 years; 15 between 20 and 30; 5 between 30 and 40; 3 between 40 and 50; 3 between 50 and 60; 5 between 60 and 70, and 1 over 80; 1 age not stated. Twenty-six were American-born, 10 foreign-born, and 1 nativity not stated.

TABLE No. 44.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Dover.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	4	4	5	4	3	1	1	3	3	3	2	4				
Quarters	13			8			7			9			37			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	3	2	3	6	10	5	3	3	1	1						
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	21	12	4
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	..	..	..
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	26	..	..	..

Percentage to total mortality of city, 11.17.

The number of deaths returned from the city of Dover for 1892 was 37, 11 males and 26 females.

Five died in March; 4, each, in January, February, April, and December; 3, each, in May, August, September, and October; 2 in November; 1, each, in June and July.

Three of the decedents were under 10 years of age; 2 between 10 and 15; 3 between 15 and 20; 6 between 20 and 30; 10 between 30 and 40; 5 between 40 and 50; 3 between 50 and 60; 3 between 60 and 70; 1 between 70 and 80, and 1 over 80.

TABLE No. 45.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Keene.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	3	2	2	2	3	1	2	2	1	1						
Quarters	7			6			5			1			19			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	2		3	1	7	1	1	2	2							
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..		19		
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10			
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9			

Percentage to total mortality of city, 13.77.

The city of Keene returned 19 deaths from consumption for the year 1892—10 males and 9 females. Three, each, died in January and May; 2, each, in February, March, April, July, and August; 1, each, in June, September, and October.

Two decedents were under 10 years of age; 3 between 15 and 20; 1 between 20 and 30; 7 between 30 and 40; 1 between 40 and 50; 1 between 50 and 60; 2 between 60 and 70; 2 between 70 and 80.

All the decedents were American-born.

TABLE No. 46.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Rochester.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
Months		1		2	2	4	1	1			1	1				
Quarters		1			8			2			2		13			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
				4	4	4			1							
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		10	1	2
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6			
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7			

Percentage to total mortality of city, 9.70.

Thirteen deaths from consumption were reported from the city of Rochester in 1892—6 males and 7 females.

Four died in June; 2, each, in April and May; 1, each, in February, July, August, November, and December.

Four decedents were between 20 and 30 years of age; 4 between 30 and 40; 4 between 40 and 50; 1 between 70 and 80.

Ten were American-born, 1 foreign, and 2 nativity not stated.

TABLE No. 47.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Laconia.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	2	3		1		1		1	1	1						
Quarters	5			2			2			1			10			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
		2		2	2		1	2	1							
Nativity														6	2	2
Males													4			
Females													6			

Percentage to total mortality of city, 7.75.

Laconia returned 10 deaths from consumption in 1892—4 males and 6 females. Three died in February; 2 in January; 1, each, in April, June, August, September, and October.

Two were between 10 and 15 years of age; 2 between 20 and 30; 2 between 30 and 40; 1 between 50 and 60; 2 between 60 and 70; 1 between 70 and 80.

Six of the decedents were Americans, 2 foreign-born, and 2 nativity not stated.

TABLE No. 48.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Somersworth.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	2			2	1	1	3	1		1	3	2				
Quarters	2			4			4			6			16			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	1	2	2	2	3	1	3	1		1						
Nativity														11	3	2
Males													4			
Females													12			

Percentage to total mortality of city, 11.68.

Sixteen deaths from consumption were reported from Somersworth in 1892—4 males and 12 females.

There were three deaths, each, in July and November; 2, each, in March, April, and December; 1, each, in May, June, August, and October.

One decedent was under 10 years of age; 2 between 10 and 15; 2 between 15 and 20; 2 between 20 and 30; 3 between 30 and 40; 1 between 40 and 50; 3 between 50 and 60; 1 between 60 and 70, and one over 80.

Eleven were American-born, 3 foreign-born, and 2 nativity not stated.

TABLE No. 49.

Percentage of Deaths from Consumption to the Total Mortality of the Cities of the State, for the years 1883 *to* 1892, *inclusive.*

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Manchester	14.89	14.28	13.03	15.01	11.15	12.37	9.30	10.29	10.40	8.77
Concord	11.41	8.66	10.68	8.60	10.13	10.23	9.81	9.13	9.30	8.43
Nashua	16.96	13.72	14.86	10.49	9.73	8.20	8.64	10.69	10.29	6.47
Dover	20.97	16.60	16.17	21.17	14.57	12.01	10.31	16.40	12.01	11.18
Portsmouth	16.02	14.74	12.18	17.84	16.26	13.26	7.73	14.34	8.17	17.61
Keene	16.91	16.00	22.80	16.00	11.90	9.47	9.62	10.25	11.90	13.77
Rochester	.....	.....	.....	.....	.....	.....	.....	.....	11.80	9.70
Laconia	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.75
Somersworth	.....	.....	.....	.....	.....	.....	.....	.....	.....	11.68

Table No. 49 gives a comparative view of the percentages of deaths from consumption in the several cities of the state for the periods stated.

Table 50 gives the mortality from this disease for 1892, by counties, ages, and sex.

Table No. 51 gives the mortality from consumption for the year 1892, by counties, months, and sex.

TABLE No. 50.

Deaths from Consumption, by Ages and Sex, by Counties, for 1892.

COUNTIES.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Grand total.
Rockingham	Males	....	....	....	1	3	16	10	7	10	9	5	3	1	65	.....
	Females	....	1	....	2	5	26	13	8	2	9	1	....	1	68	133
Strafford	Males	....	3	....	....	....	5	7	5	5	3	2	....	....	30	.....
	Females	1	1	....	4	7	12	12	6	3	2	2	4	....	54	84
Belknap	Males	....	....	....	....	....	2	3	....	3	1	2	1	....	12	.....
	Females	....	....	1	3	1	6	3	2	3	3	....	1	....	23	35
Carroll	Males	1	....	....	....	1	3	3	2	2	1	1	....	2	16	.....
	Females	1	....	....	2	1	3	3	3	2	3	1	1	....	20	36
Merrimack	Males	3	....	1	1	5	9	11	7	2	3	3	1	1	47	.....
	Females	1	....	....	....	7	13	10	6	10	2	3	....	1	53	100
Hillsborough	Males	....	3	....	....	6	23	16	9	8	7	2	3	1	78	.....
	Females	3	1	....	5	13	26	25	12	3	4	4	....	1	97	175
Cheshire	Males	....	....	....	....	2	4	5	1	4	6	5	....	....	27	.....
	Females	1	1	....	....	4	4	8	3	....	4	4	....	....	29	56

Sullivan	Males	....	....	....	1	1	.....	1	2	2	1	....	1	....	9	.....
	Females	1	....	....	1	1	6	1	2	2	1	1	2	....	18	27
Grafton	Males	....	....	....	1	3	5	3	3	2	5	2	1	....	25	.....
	Females	....	....	....	1	5	10	8	3	1	3	1	1	....	33	58
Coös	Males	....	....	....	....	1	.....	3	....	1	1	....	....	....	6	.....
	Females	2	2	....	....	....	5	5	3	2	3	2	1	1	26	32
Total for State		14	12	2	22	66	178	150	84	67	71	41	20	9	736	736

TABLE No. 51.

Deaths from Consumption by Months and Sex, by Counties, for 1892.

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Rockingham	Males	7	9	1	4	5	2	5	2	9	6	5	10	....	65	.....
	Females	3	7	8	4	7	6	10	5	3	7	5	3	....	68	133
Strafford	Males	2	4	5	3	1	2	4	1	....	3	2	3	....	30	.....
	Females	2	4	3	7	8	4	4	5	3	4	4	6	....	54	84
Belknap	Males	4	2	....	....	1	....	2	1	....	....	1	1	....	12	.....
	Females	3	5	2	1	2	4	1	....	1	3	....	1	....	23	35
Carroll	Males	2	2	1	1	3	1	3	1	1	....	....	1	....	16	.....
	Females	1	1	1	4	1	2	3	3	....	2	1	1	....	20	36
Merrimack	Males	1	4	4	5	2	2	6	3	4	8	6	2	....	47	.....
	Females	6	2	7	4	4	2	6	8	5	3	6	....	....	53	100
Hillsborough	Males	8	4	12	6	8	6	9	4	6	3	8	3	1	78	.....
	Females	8	8	11	3	9	7	9	8	6	8	14	6	....	97	175
Cheshire	Males	2	4	4	3	3	3	3	....	2	1	2	....	...	27	....
	Females	3	6	2	2	3	....	....	4	3	1	5	....	...	29	56
Sullivan	Males	1	1	....	2	....	....	....	2	...	2	....	1	....	9	.....
	Females	3	....	....	3	1	2	....	2	3	1	2	1	....	18	27

Grafton	Males	2	2	5	4	....	3	....	1	2	2	1	3	1	26	.....
	Females	5	1	3	1	4	1	8	2	1	3	3	....	....	32	58
Coös	Males	1	....	....	1	....	....	....	1	....	1	1	1	....	6	.....
	Females	3	3	1	....	2	3	3	4	4	2	....	....	1	26	32
Total for state		67	69	70	58	64	50	76	57	53	60	66	43	3	736	736

TABLE No. 52.

Deaths from Consumption, by Nativity, Civil Condition, and Sex, by Counties, for 1892.

COUNTIES.	SEX.	American.	Foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	Total.	Grand total.
Rockingham	Males.	47	10	8	30	23	11	1	65	....
	Females.	53	10	5	31	26	5	6	68	133
Strafford	Males	28	1	1	14	13	3	....	30	....
	Females	33	13	8	24	17	11	2	54	84
Belknap	Males	9	2	1	3	3	3	3	12	....
	Females	19	1	3	9	9	5	....	23	35
Carroll	Males	14	....	2	10	6	....	....	16	....
	Females	16	1	3	8	6*	1	5	20	36
Merrimack	Males	37	5	5	26	18	3	....	47	....
	Females	40	8	5	31	14	5	3	53	100
Hillsborough	Males	44	26	8	26	29	3	20	78	....
	Females	46	33	18	33	32	7	25	97	175
Cheshire	Males	23	3	1	15	8	4	....	27	....
	Females	24	3	2	14	11	4	....	29	56
Sullivan	Males	8	1	....	7	2	....	....	9	....
	Females	16	2	....	7	7	2	2	18	27
Grafton	Males	21	....	4	14	9	2	....	25	....
	Females	18	11	4	18	11	4	....	33	58
Coös	Males	5	1	....	1	1	4	....	6	....
	Females	14	4	8	11	8	3	4	26	32
Total for state		515	135	86	332	253	80	71	736	736

* One divorced.

Table No. 52 gives the nativity, civil condition, and sex of decedents, by counties, for 1892.

Out of a total of 736 deaths from this disease, 515 were American-born, 135 foreign-born, and 86 nativity not stated; 332 were married, 253 single, 80 widowed, and 71 condition not stated.

PNEUMONIA.

TABLE No. 53.

Mortality from Pneumonia, by Counties, from 1884 *to* 1892, *inclusive.*

COUNTIES.	YEARS.									Average.
	1884	1885	1886	1887	1888	1889	1890	1891	1892	
Rockingham....	45	63	77	70	83	68	90	77	96	74
Strafford.....	39	48	37	46	52	38	80	73	96	56
Belknap.....	18	24	25	44	50	37	42	28	55	39
Carroll	30	27	15	33	46	49	37	42	50	36
Merrimack.....	50	72	60	85	73	86	94	73	137	81
Hillsborough...	110	128	112	128	129	131	158	185	175	139
Cheshire.....	36	52	39	55	55	52	44	54	86	53
Sullivan.....	21	22	23	22	30	31	32	31	62	30
Grafton.....	66	48	54	52	77	64	74	53	84	63
Coös.....	21	20	24	21	33	26	52	57	49	34
Total.....	436	504	466	556	628	582	703	673	890	605

Table No. 53 gives the mortality from pneumonia, by counties, from 1884 to 1892, inclusive, with averages for that period. The total number of deaths from this disease in 1892 was 890—217 more than was returned the previous year, and 285 greater than the average for the past nine years. For the first time in our registration reports pneumonia has reached the first place among the causes of mortality. The increase in the number of deaths from this disease is doubtless due to epidemic influenza, as the increased death-rate from pneumonia occurred largely in those months registering the highest mortality from influenza.

TABLE No. 54.

Mortality from Pneumonia from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884.....	51	48	3	3	6	27	23	30	36	50	97	54	8	436
1885.....	69	49	8	4	11	15	27	32	37	72	105	74	1	504
1886.....	57	38	13	6	13	17	24	29	49	68	92	53	7	466
1887.....	68	33	7	5	13	28	32	40	48	89	121	68	4	556
1888.....	67	45	6	10	19	40	49	51	62	67	123	81	8	628
1889.....	61	50	8	12	17	29	36	40	48	98	100	79	4	582
1890.....	73	48	9	10	11	35	46	45	79	106	127	107	7	703
1891.....	73	43	15	6	11	43	31	38	74	109	126	95	9	673
1892.....	77	49	13	6	12	41	61	60	95	147	190	128	11	890

The mortality from pneumonia, by ages, from 1884 to 1892, inclusive, is given in the above table. It will be seen that the greatest number of deaths was in persons from 70 to 80 years of age. This disease is exceedingly fatal among the aged, as a comparison of these figures with the number of persons living in the different age periods will show.

TABLE No. 55.

Mortality from Pneumonia, by Months and Quarters, from 1884 *to* 1892, *inclusive.*

YEARS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
1884	55	55	51	52	32	13	14	11	5	28	51	67	2
1885	53	59	101	95	35	25	13	10	10	33	38	32	...
1886	32	44	73	51	51	33	22	18	18	24	46	54	...
1887	71	73	85	85	49	17	13	13	14	34	47	54	1
1888	72	95	75	73	76	24	16	23	21	43	36	72	2
1889	69	66	79	102	51	22	15	19	16	53	41	49	...
1890	213	74	69	43	47	35	18	9	23	23	69	79	1
1891	73	60	82	72	95	41	13	7	14	23	37	152	4
1892	384	110	83	86	57	21	5	11	19	21	34	54	5
Total	1,022	636	698	659	493	231	129	121	140	282	399	613	
Quarters	2,356			1,383			390			1,294			

Table No. 55 shows the mortality from pneumonia, from 1884 to 1892, inclusive. For 1892 the greatest number of deaths occurred in January, the large mortality of that month being a continuation of the almost epidemic prevalence of the disease which gave an excessive mortality in December of 1891. The smallest number of deaths was in August.

BRAIN DISEASES.

TABLE No. 56.

Mortality from Brain Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.						
	Cephalitis. *	Apoplexy.	Paralysis.	Insanity.	Convulsions.	Brain diseases.	Total.
1884	120	192	248	22	99	134	815
1885	133	206	278	27	93	122	859
1886	141	220	249	24	71	127	832
1887	117	210	253	25	64	121	790
1888	143	243	273	37	88	112	896
1889	151	259	196	35	76	126	843
1890	186	263	251	28	65	140	933
1891	161	283	241	44	78	130	917
1892	173	308	209	33	78	140	941
Average	147	242	244	30	79	128	869

* Meningitis and cerebritis included.

Table No. 56 shows the number of deaths from brain diseases for the past nine years. While the variation in the total from year to year is not great, there seems to be a small increase during the past three years.

DIARRHEAL DISEASES.

TABLE No. 57.

Mortality from Diarrheal Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.					Total of diarrheal diseases.
	Cholera infantum.	Cholera morbus.	Diarrhea.	Dysentery.	Enteritis.	
1884	266	21	52	80	69	488
1885	219	20	40	40	57	376
1886	362	14	38	79	53	546
1887	336	16	38	53	57	500
1888	370	8	50	63	39	530
1889	353	12	68	67	56	556
1890	399	12	.....	50	63	524
1891	486	16	46	51	73	672
1892	366	17	53	42	72	550
Average	351	15	43	58	60	527

This table exhibits the mortality from diarrheal diseases for the past nine years. Cholera infantum, which is responsible for a large proportion of the deaths recorded in this table, shows a large falling off from the previous year.

CHOLERA INFANTUM.

TABLE No. 58.

Mortality from Cholera Infantum from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Percentage of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	266	4.29	7.41
1885	219	3.53	6.05
1886	362	5.63	9.92
1887	336	5.18	9.13
1888	370	5.39	9.98
1889	353	5.27	9.44
1890	399	5.41	10.59
1891	486	6.64	12.08
1892	366	4.58	9.57
Average	351	5.10	9.35

Deaths from cholera infantum for the past nine years are shown in this table; also percentages to all deaths and to the population.

TABLE No. 59.

Mortality from Cholera Infantum, by Ages, from 1884 *to* 1892 *inclusive.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	214	48	..	..	..	..	1	..	1	..	..	..	2	266
1885	186	33	..	..	..	..	..	..	..	..	..	..	..	219
1886	283	77	2	..	..	..	..	..	..	..	..	..	..	362
1887	284	51	..	..	..	..	..	..	..	..	..	..	1	336
1888	298	70	..	..	..	..	..	..	..	..	..	..	2	370
1889	297	54	1	..	..	..	..	..	..	..	..	..	1	353
1890	343	52	4	..	..	..	..	..	..	..	..	..	..	399
1891	409	74	3	..	..	..	..	..	..	..	..	..	..	486
1892	320	41	4	1	..	..	..	..	..	..	..	..	..	366

This table shows that cholera infantum is emphatically a disease of early childhood.

TABLE No. 60.

Cholera Infantum, by Cities.

CITIES.	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Manchester	131	112	88	122	148	117	86	146	122	102
Dover	7	10	15	15	13	19	5	12	25	18
Nashua	15	14	13	30	20	39	43	56	55	36
Portsmouth	4	3	9	6	4	9	9	8	11	6
Concord	9	12	5	7	8	11	13	8	25	20
Keene	9	6	2	7	5	2	8	5	5	4
Rochester	....	....	....	....	....	....	....	....	8	5
Laconia	....	....	....	....	....	....	....	....	....	7
Somersworth	....	....	....	....	....	....	....	....	....	11
Total for cities	175	157	132	187	198	197	164	235	251	209
Total for state	278	268	219	362	336	370	353	399	486	366

Table No. 60 shows the mortality from cholera infantum by cities for the past nine years.

Manchester gives much the largest mortality, not only numerically, but in proportion to the population.

TABLE No. 61.

Cholera Infantum by Ages, Sex, and Months, particularly showing the number of Decedents in the Cities and Towns, returning the greatest Mortality from the disease, 1892.

TOWNS.	SEX.	AGES.			MONTHS.													
		Under 1.	1 to 5.	5 to 10.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Concord	Males	9	2	....	....	....	....	....	....	....	2	7	2	....	..	..	..	11	....
	Females	7	2	....	....	....	....	....	....	....	1	5	3	....	..	..	..	9	20
Dover	Males	6	4	...	....	....	....	....	....	....	1	4	2	3	..	..	..	10	....
	Females	7	1	....	....	....	....	....	....	....	3	2	3	....	..	..	..	8	18
Keene	Males	1	....	....	....	....	....	....	....	....	....	1	....	....	..	..	..	1	....
	Females	3	....	....	....	....	....	....	....	....	1	1	....	1	..	..	..	3	4
Manchester	Males	47	4	....	....	....	....	....	1	4	23	10	8	3	..	2	..	51	....
	Females	43	8	....	....	1	....	....	....	3	24	12	9	2	..	..	..	51	102
Nashua	Males	16	....	....	....	....	1	....	....	....	9	4	2	....	..	..	..	16	....
	Females	19	....	1	....	....	....	....	....	....	8	10	2	....	..	..	..	20	36
Portsmouth	Males	....	2	....	....	....	....	....	....	....	....	2	....	....	..	..	..	2	....
	Females	4	....	....	....	....	....	....	....	....	2	2	....	....	..	..	..	4	6

TABLE No. 61.—*Continued.*

TOWNS.	SEX.	AGES.			MONTHS.													
		Under 1.	1 to 5.	5 to 10.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.	Total.	Grand total.
Laconia	Males	7	....	....	....	....	....	1	....	....	3	1	2	....	..	..	..	7	....
Somersworth	Males	3	1	1	....	....	....	1	....	....	....	4	....	....	..	..	..	5	....
	Females	6	....	....	....	....	....	....	....	....	1	5	....	....	..	..	..	6	11
Rochester	Males	3	....	....	....	....	1	....	1	....	....	1	....	....	..	..	..	3	....
	Females	2	....	....	....	....	....	....	....	....	....	1	....	....	..	1	..	2	5
Berlin	Males	13	....	....	....	....	....	....	....	....	7	4	1	....	..	..	1	13	....
	Females	5	1	....	....	....	....	....	....	....	4	....	1	....	1	..	..	6	19
Newmarket	Males	3	....	....	....	....	....	....	....	....	....	2	....	....	1	..	..	3	....
	Females	6	1	....	....	....	....	....	2	1	....	3	1	....	..	..	..	7	10
Pembroke	Males	3	....	....	1	....	....	....	....	....	1	1	....	....	..	..	..	3	....
	Females	4	....	....	....	....	....	....	....	....	2	1	1	....	..	..	..	4	7
Franklin	Males	2	....	....	....	....	....	....	....	....	1	1	....	....	..	..	..	2	
	Females	1	....	....	....	....	....	....	....	....	....	1	....	....	..	..	..	1	3
Littleton	Females	4	....	....	....	....	....	....	....	....	1	1	1	....	1	..	..	4	4

Gilford	Males	1	....	....	....	....	....	....	....	....	....	1	....	....	..	..	..	1	....
	Females	4	....	....	....	....	....	1	....	....	1	1	....	....	..	..	1	4	5
Allenstown	Males	3	2	....	....	....	....	....	....	....	....	2	3	....	..	..	..	5	....
	Females	2	....	....	....	....	....	....	....	....	....	....	1	1	..	..	..	2	7
Claremont	Males	6	....	....	....	....	....	....	....	....	2	2	....	2	..	..	..	6	....
	Females	4	....	....	....	....	....	....	....	....	....	4	....	....	..	..	..	4	10
Walpole	Males	1	....	....	....	....	....	....	....	....	1	....	....	....	..	..	..	1	....
	Females	3	....	....	....	....	....	....	....	....	....	2	1	....	..	..	..	3	5
Exeter	Males	5	....	....	....	....	....	....	....	....	3	2	....	....	..	..	..	5	....
Remaining towns	Males	38	8	2	....	....	....	1	1	3	2	22	11	4	2	2	..	48	....
	Females	28	6	1	1	....	....	1	1	....	3	14	12	2	..	1	..	35	83
Total	Males	167	23	3	1	....	2	3	3	7	55	71	31	12	3	4	1	193	....
	Females	152	19	2	1	1	....	2	3	4	51	65	34	7	2	2	1	173	....
Grand total		319	42	5	2	1	2	5	6	11	106	136	65	19	5	6	2	366	366

TABLE No. 62.

Mortality from Cancer, with ratios to estimated Population and to Total Mortality from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Death-rates per 10,000 of estimated population.	Ratio to total mortality per 1,000.
1884	213	5.93	34.39
1885	212	5.85	34.19
1886	206	5.64	32.06
1887	218	5.92	33.65
1888	203	5.47	29.62
1889	213	5.70	31.81
1890	276	7.33	37.45
1891	213	5.61	30.32
1892	235	6.14	29.41
Average	221	5.95	32.54

TABLE No. 63.

Mortality from Diphtheria from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	8	39	34	17	4	2	..	1	3	..	..	1	1	110
1885	10	32	22	5	3	4	..	1	1	..	..	..	..	78
1886	9	53	58	22	7	3	1	1	2	..	..	..	..	156
1887	7	74	51	20	6	9	4	2	1	1	1	..	1	177
1888	6	43	36	7	4	2	1	1	2	1	..	..	..	103
1889	7	86	68	18	13	10	3	3	..	1	..	..	1	210
1890	6	64	45	26	10	3	4	3	..	..	..	1	2	164
1891	5	74	48	17	7	2	4	..	..	1	..	..	2	160
1892	9	54	37	14	5	6	2	2	..	2	..	..	3	134

Table No. 63 shows the mortality from diphtheria by age periods from 1884 to 1892, inclusive. It will be seen by this table that the mortality from this disease has been growing less since 1889.

TABLE No. 64.

Diphtheria, by Ages, Sex, and Months, particularly showing number of Decedents in the Cities and Towns returning the greatest Mortality from this Disease, 1892.

Sex.	Months.												TOWNS.	Whole Number.				Ages.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Unknown.		Totals.	Males.	Females.	Unknown.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.
F	..	..	..	1	..	1	..	..	..	..	..	..	..	Dover	6	4	2	....	....	1	1	....	....	..	..	..	..	..	..	..	..
M	..	1	..	..	1	..	1	1	..	..	..	..	..	"	....	....	....	....	....	2	2	....	....	..	..	..	..	..	..	..	..
F	..	2	1	..	1	..	..	..	..	..	..	..	..	Keene	9	5	4	....	....	1	1	1	....	1	..	..	..	..	..	..	..
M	3	2	..	..	..	..	..	..	..	..	..	..	..	"	....	....	....	....	....	1	1	1	1	..	..	1	..	..	..	..	..
F	..	..	..	..	2	..	..	..	..	..	..	..	..	Manchester	7	5	2	....	....	....	1	....	....	1	..	..	..	..	..	..	..
M	..	..	..	1	..	..	1	..	..	3	..	..	..	"	....	....	....	....	....	1	3	....	....	..	..	1	..	..	..	..	..
F	..	..	..	..	..	1	1	..	..	..	..	..	..	Nashua	3	1	2	....	1	....	....	....	....	..	..	..	..	1	..	..	..
M	..	..	..	..	..	..	1	..	..	..	..	..	..	"	....	....	....	....	....	1	....	....	....	..	..	..	..	..	..	..	..
F	2	..	1	1	..	..	..	..	..	..	..	..	..	Rochester	8	4	4	....	1	2	1	....	....	..	..	..	..	..	..	..	..
M	1	..	..	..	..	..	..	..	2	1	..	..	..	"	....	....	....	....	1	1	2	....	....	..	..	..	..	..	..	..	..
F	..	..	..	..	1	..	1	..	..	..	..	..	..	Concord	3	1	2	....	....	....	2	....	....	..	..	..	..	..	..	..	..
M	..	..	..	..	1	..	..	..	..	..	..	..	..	"	....	....	....	....	....	1	....	....	....	..	..	..	..	..	..	..	..
F	1	..	1	2	2	6	..	..	..	..	..	..	..	Laconia	16	4	12	....	2	7	1	2	....	..	..	..	..	..	..	..	..
M	2	..	..	..	..	2	..	..	..	..	..	..	..	"	....	....	....	....	....	1	2	...	....	..	1	..	..	..	..	..	..
F	..	..	1	..	..	..	..	..	..	..	..	..	..	Somersworth	1	....	1	....	....	1	....	....	....	..	..	..	..	..	..	..	..
M	..	..	..	..	..	..	..	..	..	..	..	..	..	"	....	....	....	....	....	....	....	....	....	..	..	..	..	..	..	..	..
F	..	..	..	..	..	..	..	..	..	1	..	..	..	Allenstown	4	3	1	....	....	1	....	....	....	..	..	..	..	..	..	..	..
M	..	..	..	..	..	..	..	..	..	3	..	..	..	"	....	....	....	....	....	2	1	....	....	..	..	..	..	..	..	..	..

F				1			2							Berlin	6	3	3			2	1										
M	1	2												"						3											
F						1								Belmont	3	2	1							1							
M		1	1											"						2											
F					1									Canaan	3	2	1					1									
M					1	1								"									1	1							
F														Derry	3	3															
M			3											"						1	1		1								
F						1	1							Franklin	3	1	2					2									
M						1								"							1										
F				1										Gilford	3	2	1														
M		1				1								"						2											1
F							1			1	1			Lebanon	5	2	3			2	1										
M											2			"						1	1										
F	1													Antrim	3	2	1			1											
M	1					1								"						1	1										
F		1		1			1							Seabrook	9	6	3			2	1										
M		1	4				1							"					2		1	2		1							
F					1	1	1							Tilton	7	4	3		1		2										
M						3	1							"						1	1	1	1								
F											1			Pembroke	3	2	1														1
M										1		1		"							1			1							
F	2	2	1		1	3				1	4			Remaining towns	29	15	14		1	5	3	2	1		1			1			
M	3		4	1	1	1			1	1	3			"						8	4	2									1
	17	13	17	9	13	24	13	1	3	12	11	1	..	Total	134	71	63	....	9	54	37	14	5	6	2	2	..	2	..	..	3

TABLE No. 65.

Mortality from Croup from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	8	35	6	..	..	..	..	..	..	..	..	..	..	49
1885	20	41	9	..	..	1	2	..	1	..	..	..	..	74
1886	13	40	10	1	..	..	..	..	..	..	..	..	..	64
1887	26	48	7	2	..	..	..	..	..	..	1	..	..	84
1888	16	67	9	..	..	..	1	..	..	..	1	..	..	94
1889	11	65	11	1	..	..	..	..	..	..	..	..	..	88
1890	16	41	6	1	..	..	..	..	..	..	..	..	..	64
1891	11	32	10	2	..	..	..	..	..	..	..	..	1	56
1892	6	32	5	1	1	..	..	..	..	..	..	..	..	45

The mortality from croup in the past nine years is shown in the above table.

TABLE No. 66.

Mortality from Croup and Diphtheria from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.			Percentages of deaths to deaths from all causes.			Death-rates per 10,000 living.		
	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.
1884	49	110	159	.79	1.77	2.56	1.36	3.06	4.42
1885	74	78	152	1.19	1.25	2.44	2.04	2.15	4.19
1886	64	156	220	.99	2.41	3.40	1.75	4.27	6.02
1887	84	177	261	1.29	2.73	4.02	2.28	4.81	7.09
1888	94	103	197	1.37	1.50	2.87	2.53	2.77	5.30
1889	88	210	298	1.31	3.13	4.44	2.35	5.61	7.96
1890	64	164	228	.86	2.21	3.08	1.69	4.32	6.02
1891	56	160	216	.79	2.20	2.10	1.48	4.22	5.69
1892	45	134	179	.56	1.69	2.25	1.18	3.50	4.68
Total	618	1292	1910	.....	.....	.....	.....	.....	.....
Average	69	142	212	1.02	2.10	3.12	1.85	3.85	5.70

The mortality from diphtheria and croup for the past nine years is shown in the above table.

From a sanitary stand-point the two diseases are considered identical.

TABLE No. 67.

Mortality from Typhoid Fever from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	137	2.21	3.81
1885	136	2.19	3.75
1886	194	3.01	5.31
1887	134	2.06	3.64
1888	150	2.18	4.04
1889	161	2.40	4.30
1890	143	1.94	3.79
1891	170	2.42	4.48
1892	109	1.36	2.85
Total	1,334	.....	.....
Average	148	2.20	4.00

The above table shows the mortality from typhoid fever from 1884 to 1892, inclusive.

It will be seen that the mortality from this disease has been reduced to lower figures for 1892 than ever before reported.

TABLE No. 68.

Mortality from Typhoid Fever, by Counties, with Percentages of Deaths to Total Mortality, from 1884 to 1892, inclusive.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	17	1.94	18	1.97	23	2.38	10	1.14	9	2.18	15	1.71	12	1.12	30	3.03	16	1.56
Strafford	12	1.91	12	1.93	21	3.44	17	2.52	13	1.88	19	2.74	19	2.37	12	1.48	11	1.27
Belknap	13	4.56	9	3.11	31	8.56	13	3.52	8	2.04	8	2.05	13	3.47	5	1.28	4	1.02
Carroll	4	1.20	8	2.97	3	.99	5	1.70	6	1.82	6	2.01	2	.66	3	.88	2	.58
Merrimack	15	2.03	15	1.88	23	2.76	14	1.67	33	3.58	20	2.24	27	2.74	16	1.68	11	1.03
Hillsborough	32	1.93	37	2.17	46	2.73	42	2.52	42	2.27	39	2.24	38	1.92	49	2.50	19	.98
Cheshire	14	2.81	14	2.83	12	2.52	6	1.24	5	1.02	10	1.90	10	1.79	10	2.07	8	1.31
Sullivan	4	1.46	4	1.40	6	1.82	5	1.76	3	.91	4	1.26	1	.30	7	2.50	9	2.35
Grafton	13	1.99	11	1.80	21	3.40	9	1.49	19	2.90	15	2.40	14	2.15	93	3.55	8	1.06
Coös	13	4.94	8	3.52	8	3.12	14	3.80	12	3.82	25	7.18	7	2.12	15	3.27	21	4.98
Total	137	2.21	136	2.19	194	3.01	134	2.06	150	2.18	161	2.40	143	1.94	170	2.42	109	1.36

* Including fever unspecified, malarial fever, and intermittent fever.

TABLE No. 69.

Mortality from **Typhoid Fever** *from* 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884.....	5	10	7	11	21	34	12	8	7	8	8	3	3	137
1885.....	2	7	7	11	20	34	14	8	7	10	11	3	2	136
1886.....	2	6	15	12	33	51	16	12	15	14	16	2	...	194
1887.....	2	6	1	16	22	41	17	8	7	6	5	2	1	134
1888.....	3	13	4	11	26	39	12	8	8	9	8	3	6	150
1889.....	4	5	6	14	26	50	13	14	10	5	6	4	1	161
1890.....	1	3	10	11	24	33	18	14	10	7	7	3	2	143
1891.....	1	3	14	12	27	52	17	15	8	9	8	3	1	170
1892.....	1	6	4	10	17	24	18	8	5	6	3	4	3	109

TABLE No. 70.

Mortality from Bright's Disease, Nephritis, and other Kidney Diseases, and from Dropsy, with Ratios to Total Mortality, from 1884 *to* 1892, *inclusive.*

YEARS.	Total mortality from all causes	Deaths from Bright's disease, nephritis, and other kidney diseases.	Ratio to total mortality per 1,000.	Deaths from dropsy.	Ratio to total mortality per 1,000.	Totals.	Ratio to total mortality per 1,000.
1884.....	6,194	140	22.60	80	12.91	220	35.51
1885.....	6,201	157	25.32	90	14.51	247	39.83
1886.....	6,426	143	22.25	83	12.92	226	35.17
1887..... ...	6,479	163	25.16	79	12.19	242	37.35
1888.....	6,854	253	22.47	75	10.94	229	33.41
1889.....	6,696	290	29.87	62	9.26	262	39.13
1890.....	7,368	201	27.28	53	7.19	254	34.47
1891.....	7,310	219	29.96	41	5.61	260	35.57
1892.....	8,988	222	27.99	43	5.38	265	33.17
Average	6,835	177	25.85	67	10.10	244	35.96

SCARLET-FEVER.

TABLE No. 71.

Mortality from Scarlatina from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living population.*
1884	52	.83	1.44
1885	53	.85	1.46
1886	21	.32	.57
1887	26	.40	.70
1888	34	.49	.91
1889	18	.26	.48
1890	16	.21	.42
1891	13	.18	.34
1892	27	.33	.71
Total	260	.....	.....
Average	29	.43	.78

* Population estimated for all but census years.

Table No. 71 exhibits the number of deaths returned from scarlet-fever for the past nine years.

There was an increase in the mortality of this disease in 1892 over that of the three previous years.

TABLE No. 72.

Mortality from Scarlatina from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884.....	7	20	12	8	1	4	....	....	....	....	....	....	...	52
1885.....	5	30	11	4	1	1	1	....	....	....	....	....	...	53
1886.....	1	8	9	1	....	1	....	....	....	....	....	....	1	21
1887.....	5	10	3	6	....	2	....	....	....	....	....	....	...	26
1888.....	5	16	5	3	2	....	1	1	....	1	....	....	...	34
1889.....	4	7	3	2	1	....	....	....	....	....	....	....	1	18
1890.....	2	10	1	1	....	2	....	....	....	....	....	....	...	16
1891.....	1	7	4	1	....	....	....	....	....	....	....	....	...	13
1892.....	2	12	10	2	....	1	....	....	....	....	....	....	...	27

TABLE No. 73.

Deaths from Scarlatina by Counties, 1892.

COUNTIES.	Deaths.	COUNTIES.	Deaths.
Rockingham.....	10	Hillsborough.....	2
Strafford.....	4	Cheshire.....	5
Belknap.....	.....	Sullivan.....	.....
Carroll.....	.....	Grafton.....	1
Merrimack.....	5	Coös.....	.....

MEASLES.

TABLE No. 74.

Mortality from Measles from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living population.*
1884	3	.04	.08
1885	45	.72	1.24
1886	18	.28	.49
1887	39	.60	1.06
1888	55	.80	1.48
1889	16	.23	.42
1890	9	.12	.23
1891	19	.26	.50
1892	24	.30	.62
Total	228	.....	.....
Average	25	.37	.68

* Population estimated for all but census years.

This table shows the number of deaths returned from measles since 1884.

TABLE No. 75.

Mortality from Measles from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884.....	1	1	....	....	1	....	....	....	....	....	....	....	...	3
1885.....	12	26	5	1	1	....	....	....	....	....	....	....	...	45
1886.....	5	13	....	....	....	....	....	....	....	....	....	....	...	18
1887.....	19	10	2	1	3	....	2	1	....	1	....	....	...	39
1888.....	14	20	6	3	2	2	5	1	1	....	....	1	...	55
1889.....	2	6	1	....	2	2	1	....	1	....	....	....	1	16
1890.....	5	4	....	....	....	....	....	....	....	....	....	....	...	9
1891.....	5	6	2	....	2	....	1	1	....	1	....	....	1	19
1892.....	7	11	....	1	1	3	....	....	1	....	....	....	...	24

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TWELFTH ANNUAL REPORT

OF THE

STATE BOARD OF HEALTH

OF THE

STATE OF NEW HAMPSHIRE

FOR THE

FISCAL YEAR, 1893.

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STATE OF NEW HAMPSHIRE.

OFFICE OF THE STATE BOARD OF HEALTH,

STATE HOUSE, November 1, 1893.

To His Excellency the Governor and the Honorable Council:

In conformity with the laws of the state of New Hampshire, I have the honor to present herewith the Twelfth Annual Report of the State Board of Health for the fiscal year 1893.

Respectfully submitted:

Irving A. Watson

Secretary.

MEMBERS OF THE BOARD.

GOVERNOR JOHN B. SMITH	Hillsborough.
ATT'Y GEN. E. G. EASTMAN	Exeter.
HON. JAMES A. WESTON	Manchester.
G. P. CONN, M. D., *President*	Concord.
JOHN J. BERRY, M. D.	Portsmouth.
IRVING A. WATSON, M. D., *Secretary* .	Concord.

REPORT.

Herewith is presented the twelfth annual report of the State Board of Health of New Hampshire.

The sanitary progress in this state since the organization of the board twelve years ago, is probably greater than that made during the entire preceding generation. The results are to be seen in every town in the state—a better knowledge among the people of the means necessary to protect and prolong life, the introduction of sewer systems, public water-supplies from uncontaminated sources, cleaner environments, better ventilated buildings, public and private, more rational management of communicable diseases. In fact this progress is exhibited not alone in the corporate action of towns and cities, but is strongly and emphatically shown by the individual family in demanding a certain standard of cleanliness in their immediate vicinity, which only a few years since was not thought of as essential to health.

As a board we have always maintained, and do still maintain, that sanitary education is necessary to sanitary progress, and have, therefore, made it one of the most prominent objects of our work to furnish information in matters pertaining to public health, thereby making it easy to enforce sanitary rules and regulations. If a community understands fully the necessity for a given regulation, its enforcement is not difficult.

This board takes to itself no special credit for the great work that has been and is being done, beyond that of having attempted to perform faithfully the duties imposed upon it by the people of New Hampshire ; but it cannot refrain from entertaining at least some satisfaction that such

marked results for the good of the people have been accomplished in so relatively brief a period.

The press of the state, the medical profession, the Woman's Christian Temperance Union and other organizations, are aiding the efforts of this board, and doing an incalculable amount of good in educating the people in hygiene and sanitation.

THE PREVENTION AND RESTRICTION OF EPIDEMIC DISEASES.

The legislature of 1893 enacted a law placing the quarantine authority of the state in the hands of the State Board of Health, and at the same time created an epidemic fund of ten thousand dollars which, added to a sum previously provided by the Public Statutes, makes a total of fifteen thousand dollars available for the purpose of controlling epidemic diseases. No part of this sum can be used for other purposes.

The quarantine authority thus conferred upon the board appears to be able to meet any emergency that may arise. The law and the rules and regulations established under it may be found on page 19 of this report.

ELECTION OF HEALTH OFFICERS.

The present method of choosing health officers in this state is deplorable, and not at all in keeping with the progress that has been made in sanitation within the past few years. The prevention and restriction of disease has become a science as exact and as definite as the scientific practice of medicine. In fact it is now recognized as a distinct branch of medicine, and in most of our medical colleges has a special chair for the instruction of medical students. The marvellous advancement in bacteriology has revealed the exact cause of many of the diseases that affect both man and animals, and clearly shows how some of these diseases may be controlled. Therefore, the functions of a health

officer have been placed upon a definite basis, requiring knowledge, skill, good executive ability, and a full measure of common sense. The knowledge essential to a full understanding of the duties of a health officer cannot be obtained in a day, or even in a year. To commence with, he should have a good education, and should be a respected citizen in the community in which he lives. He should take at least one good sanitary journal, and should study the practical literature of hygiene. He should know definitely certain things relating to all the diseases with which he may be officially brought in contact—their cause, period of incubation, usual duration, the varying degrees of convalescence, how long isolation should be maintained, the method of disinfection—in fact, he should possess a knowledge of preventive medicine sufficient to direct all his official actions along exact and scientific channels. This is not less than what is or may be at any time required of a local health officer. But what have we in New Hampshire? How are the legal protectors of the public health, guardians against scarlet-fever, diphtheria, and a score or two of other no less prolific causes of death, selected? A board of health is elected at the annual town-meeting or is appointed by the selectmen, or possibly this latter board decides to serve in that capacity itself. This board, if it takes any interest in the public health questions of its town, writes the state board of health for "instructions." Circulars, laws, reports, etc., are forwarded, besides letters upon special subjects. By the end of the fiscal year the board has become fairly well qualified to perform its duties; but now comes the annual election, and a new board is elected, to go through the same course and to meet the same end as its predecessor. By this system, which is by no means infrequent, the town is prevented from ever possessing a really efficient board of health. We would, therefore, recommend to the legislature the enactment of a law providing for a board of health in every town, to consist of

three persons, with a term of office so fixed that one member only would be retired from the board each year, and one member elected to fill the vacancy. This would always ensure experienced men upon the board, thus rendering the local boards of health far more efficient than they are under the present method of election and appointment. We believe that such a plan would greatly increase the value of our public health service.

LUNACY.

The State Board of Health constitutes also the State Board of Commissioners of Lunacy. The functions of the board are: The inspection of asylums and institutions in which insane persons are confined, and to commit to the New Hampshire Asylum for the Insane, for remedial treatment, such indigent insane persons as the board may determine to be proper subjects for such treatment. Such cases are supported, while at the state asylum, at the expense of that state. The operation of the law has been most salutary, as may be seen by an examination of the report of the Board of Commissioners of Lunacy.

In addition to providing remedial treatment for such persons in the pauper classes as need it, such treatment is also provided for the poor who, although not dependent upon town or county, are unable to bear the expense incurred at the state asylum.

Of the total number of persons committed for remedial treatment, by order of this board, during the past four years, 16.13 per cent. have recovered, and 5.37 per cent. have been discharged improved.

THE CATTLE COMMISSION.

As a factor of no small importance in the public health work, as well as for the stock raising interests, should be mentioned the State Board of Cattle Commissioners, of which the secretary of the State Board of Health is a mem-

ber, *ex officio*. The work of the commission is devoted almost wholly to the suppression of tuberculosis among the cattle of the state. During the year 1893, two hundred and twenty one herds have been inspected, from among which one hundred and fifteen tuberculous cattle have been condemned and destroyed. Since it is a settled conclusion that tuberculosis (consumption) may be communicated to the human family by means of tuberculous meat and milk, the effort to stamp out the disease among cattle is of great public importance. A report upon this work may be found upon page 66 of this report.

CONSUMPTION.

The most formidable and fatal of all the diseases that affect the people of this and many other countries, is consumption. The true nature of this terrible malady has, within a few years, been revealed by means of the microscope and by experimental work in the bacteriological laboratories, such as the culture of the germ of the disease, inoculation of lower animals, etc. In fact this disease is now known to be dependent solely upon a germ which must be received from some prior case, either from man or tuberculous animals. This knowledge places consumption, positively and forever, in the list of communicable and preventable diseases, and it is the one malady above all others that will in the future receive the most attention from physicians, sanitarians, and the people as a whole.

Epidemics that slay, relatively, only a few will probably continue to cause temporary excitement in the community and will, of course, demand prompt activity on the part of health officials; but an effort, calm, steady, and continuous, based upon exact knowledge, with simple rules, must be inaugurated and maintained year in and year out to lessen the alarming prevalence of this silent and insidious disease. Fortunately such a work can be carried on without entailing any hardship upon the afflicted, without quarantine or

isolation. The following of a few simple rules, not especially troublesome or inconvenient, is sufficient to protect the other members of a family in which there is a case of consumption.

The energies of some of the state boards of health of this country are now being turned toward this disease. The campaign must be one of education, that every family, if possible, may be instructed in the means of preventing and restricting it. Considerable space has been given to this subject in the recent reports of this board. Elsewhere in this report we give specific recommendations for the prevention and restriction of consumption. A special circular, for general distribution throughout the state, will soon be issued from this office.

DIPHTHERIA.

The mortality from diphtheria has been gradually lessening in this state since 1889, in which year there were returned two hundred and ten deaths from this cause. It is not unreasonable to conclude that the reduction in the prevalence and death-rate of this disease is due largely, if not entirely, to the more energetic action of local boards of health, coupled with a better knowledge on the part of the public in regard to the true character of the malady and the measures necessary to restrict it. It is only in recent years that the communicable nature of diphtheria has been fully realized. A fear of it now pervades every community, so that isolation of individual cases is not only comparatively easy, but is demanded by the public. The law of the state requires every case of diphtheria to be promptly reported to the local board of health, the latter officers being instructed in the sanitary management of the disease by the State Board of Health.

This board also furnishes pamphlets on the "prevention and restriction of diphtheria," free of all expense, to local boards of health for general distribution, or to individuals.

From a sanitary stand-point, "membranous croup" must hereafter be treated as diphtheria by health officers. For an elucidation of this point see page 35 *et seq.* of this report.

SCARLET-FEVER.

Scarlet-fever in the past ten years has been remarkably lessened in New Hampshire, although it was slightly more prevalent during the year 1893. This increase was due to causes which in most instances might have been avoided. In some localities the spread of the disease was due entirely to the inefficiency of the local board of health—a neglect to isolate effectively and to disinfect properly in the first case, thereby allowing the disease to obtain a foothold. In one section there is strong evidence for the belief that the disease was quite extensively spread by a milk dealer. But there is one way in which scarlet-fever is spread that is not so easily controlled, to wit: Through the medium of very mild cases. Often these cases are not seen by a physician, and do not come under the observation of the health officer. Notwithstanding these facts, scarlet-fever is so effectually controlled under the present system of isolation and disinfection, that the mortality is small compared with its ravages before the inauguration of restrictive and preventive measures.

TYPHOID FEVER.

Typhoid fever is one of the diseases that is spread by sanitary indifference, more commonly through infected water-supplies, and which in years past has often prevailed endemically in many of our towns. In recent years its prevalence has been curtailed to a very marked extent by sanitary work. The introduction of public water-supplies in the cities and larger towns, which formerly depended upon surface wells that could not from the very conditions surrounding them be other than dangerous to health, has diminished typhoid fever very materially. The tabulated

statistics of death in this state show that the mortality from typhoid fever in 1892 was lower than that recorded in any previous year since returns have been made to the state, the number being one hundred and nine for the entire state.

THE DEPARTMENT OF VITAL STATISTICS.

The record and return of births, marriages, and deaths now approximate accuracy to a greater degree than ever before. The law is enforced in every town in the state. The record of marriages and deaths is as complete as it is possible to obtain; the birth returns are not complete, chiefly for the reason that many births are unattended by any physician or midwife, and are not returned to the town-clerk by the parents. The value of these records, especially of deaths, to the health authorities as a guide to sanitary work, is incomparable. In fact, no intelligent sanitary work can be carried out without the statistics of deaths as a guide. They are absolutely indispensable to an economical and scientific application of preventive medicine. The importance of an accurate registration is, therefore, beyond computation, even though the mass of statistical matter contained in the registration reports may seem to the casual observer to be of doubtful utility.

There is another feature connected with these returns which makes them exceedingly valuable, and that is the fact that the state has on file the individual record of a great part of its population, and a few years, if these returns are continued, the state will have in its possession the records of substantially all its citizens. Several towns have lost all their records by fire during the past few years, and but for those on file in this office, they could not be duplicated. A record of these vital events is often of great importance in determining the rights of the individual, political and civil. We have in this department nearly three hundred thousand individual records, and it is the intention, if suitable room can be secured in the new state

library building, to have them so classified and arranged that any one of them may be found in a moment. Such an arrangement is much needed, for it is almost impossible to get at the records as they are now filed, in bundles in the vaults of the state house.

SECRETARY'S REPORT.

Under this heading, in the following pages, will be found some of the transactions of the board which are deemed to be of public interest. A portion of this report is of more special importance to health officers and physicians, while the greater part contains papers on various sanitary topics instructive to all our citizens.

The eagerness with which the reports of this department are sought at the present time would seem to indicate that their educational and instructive features are thoroughly appreciated by the people of New Hampshire.

SECRETARY'S REPORT.

BURNING OF THE STRAFFORD COUNTY ASYLUM FOR THE INSANE.

On the night of February 9, 1893, the Strafford County Asylum for the Insane was burned, and with it the lives of forty-one of its inmates were lost, out of a total of forty-four which were confined in the building when the fire broke out. This appalling catastrophe aroused the people of the state, and for the time being, the legislature also, which was then in session. Immediately following this shocking conflagration the legislature, by a unanimous vote, evidently for the purpose of protecting the defenceless poor and insane at the several almshouses in the state, passed a concurrent resolution directing the State Board of Health to investigate the facts regarding the fire and to report particulars, "*with such recommendations as it deems best for the public good.*" The board promptly made the investigation, conducted personally by Attorney-General Eastman, taking the verbatim testimony of the witnesses, and summarizing the same into a brief report, with the conclusions and recommendations of the board, and presented the same to the legislature several weeks before its final adjournment. It is immaterial, so far as results are concerned, whether the legislature of 1893 was forgetful or neglectful of its duty to that most unfortunate class which is solely dependent upon the public for care and protection, but it is a matter of record that that legislative body adjourned, *sine die*, without enacting a single provision for the protection of the inmates of the almshouses

of the other nine counties in the state against a similar death! Not a single recommendation of the board was carried out.

It is, also, a matter of history that a bill was introduced to place all of the indigent insane under state supervision and care, in connection with, and under the management of, the New Hampshire Asylum for the Insane, but the measure did not pass the house. Its failure to pass was due, probably, to the lateness of its introduction, as the bill came directly from the Judiciary Committee, and was supported by many of the most influential legislators.

The present system of maintaining the pauper insane at our county almshouses has many and serious objections, which can be made apparent to any person who carefully and impartially studies the conditions, together with the requirements essential to the most modern care and treatment of the chronic insane. We trust that the members of the next legislature will carefully and thoroughly investigate this subject, and then enact such measures as may be necessary to carry into effect at least some of the recommendations made by this board in its report upon the Strafford County horror. Unless this is done, the constant and untiring efforts of the State Board of Health, towards bettering the condition of our poor and reducing the dangers which are a constant menace to their lives, would seem to be little less than a thankless and useless effort.

We append herewith the report of this board upon the Strafford County case:

THE STATE OF NEW HAMPSHIRE.

Office of the State Board of Health.

Concord, March 8, 1893.

To the Honorable Senate and House of Representatives:

In accordance with the instruction received from your honorable bodies, the State Board of Health submits herewith a partial report of the work authorized by the following concurrent resolution:

"*Resolved*, That the State Board of Health be directed to investigate the cause of the recent fire at the Strafford county almshouse and asylum, by which forty or more persons were burned to death; and, further, the said board shall investigate the management, construction, and condition of the said county buildings; the board shall also include in its investigation any other almshouse, or asylum for the insane, in this state that it deems necessary, and the board is empowered to send for persons and papers, and it shall report, at as early a day as practicable, all the particulars of its investigation, with such recommendations as it deems best for the public good."

The board finds it to be impossible to investigate in detail the construction, condition, and management of the asylums and almshouses in all of the counties, in season to make a report upon the same at this session of the legislature. The board purposes, unless otherwise instructed, to extend its investigations to all the institutions named in the concurrent resolution, and to report upon these at the next session of the legislature. We are of the opinion that the continuance of this investigation is necessary, in order to place before the proper authorities and the people the exact condition of these institutions. We are, however, emphatically of the opinion that it is the duty of the present legislature to take decided action in behalf of the pauper and indigent insane of the state.

In accordance with the terms of the resolution, the State Board of Health conducted a somewhat extended investigation into the cause of the fire at the Strafford County Asylum for the Insane, and into other matters connected with the management of that institution and the county almshouse. The entire investigation was conducted under the legal advice and presence of the attorney-general, together with other members of the board.

The coroner of the county was subpœnaed, with all the evidence presented to the coroner's jury, at the inquest held by the county. In addition, the board examined thirteen witnesses. For explicit information as to the basis of the conclusions and recommendations herewith submitted, reference may be had to the testimony given at the coroner's inquest, and to 253 pages of type-written evidence taken by the board, all of which is on file in the office of the said board.

We find that on the night of February 9, 1893, the Strafford County Asylum for the Insane was destroyed by fire, and that by reason of said fire forty-one persons lost their lives.

We find, as also did the coroner's jury, that

"Said asylum was a two-story building, with two-story L with attic; first floor occupied by keeper and his family and seventeen inmates, second floor by nineteen inmates, attic by eight inmates. There were fifty-six cells or apartments in all,—twenty-one apartments or cells on first floor, twenty-three on second, and twelve in attic. The asylum was erected some twenty years ago, repaired and enlarged somewhat about ten years ago, constructed wholly of wooden materials, floorings, partitions, sheathing, and furnishings to all the cells of pine lumber, flooring and sheathing so dried and shrunken in portions of building as to enable persons to see each other between floors and cells, heated throughout by steam from boiler, by pipe hung from overhead. Its location was seventy feet west of the

almshouse and four miles from Dover and about six miles from Great Falls and Rochester. The out-door enclosure for the use of the inmates was surrounded by a wooden fence about ten or twelve feet high, windows to asylum barred with four or more bars; also some of the windows had heavy wire screening on the inside; building had four doors, one in main building, one in L, one leading into the out-door inclosure for women, and one leading into a like inclosure for men. Said building was supplied with two hundred feet of rubber hose, one hundred feet of which was kept coupled onto pipe leading to tank in the attic of almshouse; capacity of tank, twenty thousand or more gallons, that is always kept well filled by supply from pumping station. Another one hundred feet of hose hung on reel near stand-pipe; also supplied with four water-pails on first and four on second floor, which were always kept full."

At the time of the fire, and for several months previous, the management and control of the asylum was in the hands of the keeper, William P. Driscoll, with the exception that he had nothing to do with the food and clothing for the inmates, the same being supplied from the county almshouse under the direction of Chas. E. Demeritt, the superintendent. Mr. Driscoll was assisted at the asylum by his wife, who was matron of the institution. There were no other employés, the entire care of the forty-four inmates devolving upon Mr. and Mrs. Driscoll. Formerly Mr. Demeritt had entire charge of the almshouse and the asylum, but, owing to a personal difficulty which arose between himself and Mr. Driscoll, the county commissioners divided the authority, by giving Mr. Driscoll full control of the asylum, and thereby relieving Mr. Demeritt of that especial duty.

There was a night watchman, Wilbur Chesley, who received his orders solely from Mr. Demeritt, superintendent of the almshouse, and who was required to make six rounds each night, one of the stations, No. 4, being in the

asylum for the insane. In making his ten o'clock round on the night of February 9, he saw, upon entering the storm door at the main entrance of the asylum, through the glass of the inside door, a reflection from a fire in the cell of Mary LaFontaine. He entered the asylum as quickly as possible, and rushed to the apartment occupied by Mr. Driscoll and family at the further end of the corridor in the L, and informed him of the fire. Without waiting to dress, Keeper Driscoll rushed to the cell occupied by Mary LaFontaine and unlocked it, then turned and unlocked the cell of Jim Daly, near by, telling the watchman to "Get some water and open the doors;" but while getting Daly out, Mrs. LaFontaine jumped upon Mr. Driscoll's back. Mr. Driscoll almost instantly disengaged himself from Mrs. LaFontaine, as he states himself, and the watchman also testified that Driscoll had freed himself from the woman before he had got the front door unlocked. The watchman, Chesley, left the asylum as quickly as possible, the spring lock effectually closing the door after him. Driscoll proceeded to unlock the other cells, and succeeded with those upon the first floor, barely escaping from the building in season to save himself and family. By this time, owing to the combustible nature of the building, it was so thoroughly on fire that further efforts proved unavailable. Two of the inmates whose rooms were unlocked by Mr. Driscoll escaped from the burning building, and one woman was rescued from the second story from outside. The remaining forty-one inmates were destroyed.

Some points brought out in the evidence taken by the board are herewith submitted:

John S. Daniels, coroner of Strafford county, and formerly physician to the Strafford County Almshouse and Asylum, testified that he had remarked to the county commissioners and to the keeper that the building was a poor one, and that the county ought to have a better one; that it was impossible to keep it in a clean and healthy condi-

tion; that the sheathing had shrunk so that one could look through the cracks; that some of the beds had no coverings on, because the patients tore them up; that a woman who was partially paralyzed had charge of the wards a good part of the time during his last term of service at the institution; that she was a pauper taken from the almshouse; that he made no recommendations in his report to the county as county physician regarding defects, but followed the course taken by other physicians.

Dwight E. Edgerly, chairman of the county commissioners, testified that he had held the office of county commissioner three years and eight months; the improvements in the asylum during that time were new floors and a few new cells in the attic; no appropriations for buildings during his term of service; no instructions had been received from the county delegation; not more than one half or two thirds of the delegation visited the institution; Demeritt had no control over the asylum after Driscoll was given authority; cooking for the asylum was done at the almshouse and furnished, but Driscoll had no authority to dictate what the food should be; he had thought of asking the county delegation to appropriate money for fire escapes; never tested fire hose and never saw it tested; no ladders at the asylum building; the unsafe character had been mentioned by the state board of health, and the county delegation had spoken of it; Driscoll could probably have done more effectual service with the hose than with the pails of water; the watchman received his orders from Demeritt; commissioners never looked at the watchman's dial; Demeritt had full control of the watchman; Driscoll could not order the diet of the patients; did not consider the building used for the insane fit for the purpose; it was about as bad a fire-trap as could be.

Winthrop S. Meserve, county commissioner, said he had never tested the hose; did not think the building suitable for the insane; did not think the county delegation com-

petent to judge of the necessities of such an institution; never inspected the fire apparatus; gave Mr. Demeritt no particular instructions; if anything came up he talked it over with the commissioners; the matter of managing the institution was left wholly to Demeritt; found it absolutely impossible to classify the inmates at the county asylum. He corroborated the statements made by County Commissioner Edgerly.

Frank P. Reeve, county commissioner, said that he never looked at the fire apparatus, but had seen Driscoll using the hose in washing windows; suggested to the county commissioners, Edgerly and Meserve, that the asylum was unfit for the purpose; talked with Driscoll about his drinking; authority divided only in relation to the management of patients; Demeritt was told to visit the asylum and report anything amiss.

Charles E. Demeritt, superintendent of the Strafford County Almshouse, testified that he got his instructions about managing the farm from the commissioners; prepared the food and clothing for the inmates of the asylum, which was about all he had to do with it; formerly had a little trouble with Driscoll, and the matter was referred to the commissioners, and the latter gave Driscoll control over the asylum, but asked him (Demeritt) to look around occasionally and make report of anything wrong; did not know as the help were instructed regarding the use of the hose; did not consider the asylum a part of his business after the difficulty with Driscoll, and so assumed no responsibility about that building afterwards; reported to the commissioners that Driscoll had been away from duty two or three days; in Driscoll's absence, Mrs. Driscoll looked after the inmates; had heard that Driscoll drank, but never saw any signs of it; never saw him about the premises when he appeared to have been drinking; never had any practice in using hose, or any instructions what to do in case of fire, except he gave some instructions to the watchman; some

three or four times the dial did not show that the watchman visited the asylum; it indicated that the watchman did not turn the key on the nine o'clock round on the night of the fire; did not know as he had ever spoken to the watchman about the matter; the watchman called his attention to the fire; at that time the lower part of the building seemed to be all ablaze, and smoke was coming out of the windows; sent for ladders and axes and they were brought from a shed near the stable; never made any suggestions to the commissioners regarding the building; had been fortunate in getting pretty good help; had one man in his employ who got drunk; there was no reason why the watchman could not have taken the keys from their boxes to his own room and there have properly wound the clock; usually took the dials off and threw them into the waste-basket; never thought of showing them to the commissioners; found that the watchman did not always make his rounds as expected; boilers had not been tested since he was superintendent; three inmates of the asylum were supported by private parties; knew that this was in violation of the law; the locks to the cells in the house of correction, in the basement of the almshouse, have each a different key; think the protection against fire in the almshouse rather poor; have not drank a drop of liquor for six or seven years; got into an excited condition, could not sleep well, and took chloral to quiet nerves; thought he took too much; followed it daily for quite a number of days; commenced using it some weeks ago, but had not used it for the past four days; stopped using it as soon as he found out its effect; he supposed his appearance of having used liquor was due to the chloral.

William P. Driscoll, the keeper of the Asylum for the Insane, testified that he had been at the institution since seven years last September, and most of the time since had been in charge of the asylum; there were forty-four cells occupied at the time of the fire; each inmate had a sep-

arate room; two thirds of the inmates were pretty reasonable at times; food was prepared at the almshouse and brought over to the asylum; the distance from the top of the boiler to the flooring overhead was about twenty inches; there was some sand on top of the boiler; the water-pails were full; inspected them twice a week on an average; had 200 feet of hose; had thrown water up to second-story windows in washing them with it; told Chesley to get some water and to open the doors, and after that did not remember seeing him; thought if he had not been hindered by Mary LaFontaine he could have stopped the fire; there were four exits from the building; the State Board of Health had spoken of the bad condition of the building; the partitions were shrunken badly, so there were cracks between them; they used to putty them up before they were painted, and some of the inmates would dig it out, and in some places he could put his finger in; the inmates would run spoons and other things through; the watchman informed him that the asylum was on fire; he sprang out of bed and passed him on the way to Mary LaFontaine's cell and unlocked her door; said the blaze when he first saw it was not larger than a bushel basket, and burned up in a small flame. Before unlocking her door he immediately unlocked Daly, thinking the latter would assist him, and by that time Mrs. LaFontaine was on his back; he released himself immediately, and threw two pails of water on the fire, then, thinking the fire beyond his control, he proceeded to unlock other rooms; the hose was not used; he thinks he unlocked every door on the first floor, with possibly one exception; the locks were spring padlocks, and it required three different kinds of keys to unlock them; that quite a number of the patients had judgment enough to get out if they could have done so,—two thirds, according to his best judgment; he asked Chesley to unlock doors, and he replied, "I will get some help," and that was the last he saw of him until after the

building was burned; was not accountable to Mr. Demeritt for anything; if he did not get food enough for the inmates, it was his place to ask for more; had nothing to do with the quality of the food, only the quantity; Mr. Edgerly spoke to him once about being away from duty; Mr. Edgerly asked him about drinking; he told him that he had drank; he never used liquor about the institution, never drank a drop there while in charge of it; there used to be a fireman at the institution who got drunk; had seen one of the cooks intoxicated; had heard it mentioned that Demeritt drank; heard some of the inmates make that remark; had seen Demeritt when he thought he had been drinking; it was the morning after the fire; some of the inmates of the almshouse had been to Dover and returned under the influence of liquor; thought Mr. Chesley's near-sightedness was against him as a watchman; he was also afraid to make his rounds alone at times; some of the inmates complained of others disturbing them at night; it had been six or eight weeks since he had used any intoxicating liquor; signed the pledge some six weeks ago and had drank nothing since; had no authority over the watchman at the asylum; Mr. Demeritt showed the watchman around, so supposed he had given him full instructions; never showed the watchman anything about the hose; it was right in front of him when he came in; there were two hanging lamps in each corridor; there was nothing to hinder an inmate from breaking those lamps if they were so disposed; every inmate was locked up at night; some of the patients were more or less noisy every night; if he heard a strange noise he investigated it; the woman with the broken hip was strapped to her bed to keep her from getting out; the strap was fastened to a staple in the side of the building; received attention at night until the leg was knitted, after which she was left alone; watchman was instructed to report anything wrong, but never reported; administered medicine to violent patients if he deemed it

necessary; several of the inmates smoked; Mary LaFontaine smoked once or twice a week on an average; supposed Mrs. LaFontaine set the buildings on fire; think she must have had a match; he gave the inmates matches when they wanted to smoke, and some one of them might have handed her a match; gave them one or two matches at a time.

Wilbur S. Chesley testified that he was hired by Mr. Demeritt to serve as watchman; was recommended by Commissioner Meserve; commenced work the 17th of December last; went through the corridors of the first and second floors at the asylum on each round; did not go into the attic; the night of the fire he went into the asylum about five or ten minutes past nine; this round was not registered on the dial, so must have omitted to use the key; on the next round, about ten o'clock, saw a reflection of fire from Mrs. LaFontaine's room through the glass door of the asylum. Went directly to Driscoll's sleeping-room and told him that the asylum was on fire; he came out immediately, took the keys and began to unlock; told him to unlock the outside door; he had the key to this door only; unlocked the door and went directly to the almshouse and aroused the superintendent and others, then went back to assist at the fire; the fire was so advanced that no one could enter the building; did not know anything about the hose in the building; never received instructions from anybody regarding fire; took his instructions from Mr. Demeritt; did not consider that Mr. Driscoll had anything to do with him; Mr. Demeritt told him about the hose and fire-buckets in the almshouse; never tried the hose; had always been near-sighted; discovered that Mr. Demeritt had used chloral; saw him when ill in his room several times when he appeared stupid; saw him two weeks later in same condition; saw the woman get on Driscoll's back, and saw him disengage himself from her; Mr. Driscoll did not ask him to assist him in getting free

from the woman; did not think the fire could have been extinguished with the hose if it had been used; an inmate might have made a great deal of noise through sickness or distress and he would not have known the cause; did not know how many pails of water there were in the asylum; had never seen any; there was a Yale spring lock on door; at first was told to look after the woman with broken hip in making his rounds, but after one or two nights no attention was paid to her; never gave attention to any other patients.

The above synopsis of the more salient points brought out by the principal witnesses, is presented for the purpose of giving a more general knowledge of the case than otherwise would have been obtained except by reference to the quite voluminous stenographic report of the hearings.

The board has carefully reviewed all the evidence presented in this case, and has arrived at the following

CONCLUSIONS:

First. That the fire originated in the room occupied by Mary LaFontaine, and was, probably, ignited with a match in her possession. It was shown that matches were furnished those inmates who smoked. She smoked occasionally, therefore it would not be difficult for her to obtain matches herself or from other inmates. That the attendant of the asylum, William P. Driscoll, in a manner inexcusably careless, furnished matches to the aforesaid inmates when called for.

Second. That the fire might have been extinguished immediately after its discovery, had the watchman, Mr. Chesley, and the keeper, Mr. Driscoll, promptly made the attempt, inasmuch as at the time of its discovery the fire was small, being, according to Mr. Driscoll's testimony, "no larger than a bushel basket," and there was a fire hose ready for instant use, within a few feet of the fire, which was not used at all.

Third. That Mr. Wilbur S. Chesley, upon his own testimony, is shown to be totally unfit for a watchman, by reason of his defective eyesight, and also in not knowing, after having made the rounds of that institution for several months, that there was a fire hose and fire-buckets in the asylum.

Fourth. That the superintendent, Mr. Charles E. Demeritt, while having many commendable qualities, was inefficient in his administration of the affairs of the institution in the following particulars: Neglect in not having given specific instructions to his employés (and especially the watchman) as to what should be done in case a fire was discovered; in not disciplining or reprimanding the watchman for failure to perform his required duties, as shown by the register dial of the watchman's clock; in not having a properly organized and drilled fire squad, consisting of his employés and such inmates as might be available.

Fifth. That the attendant, Wm. P. Driscoll, was guilty of faulty management in not having instructed the watchman regarding the means available for extinguishing fire at the asylum, even though the testimony shows that he had no authority over the watchman.

Sixth. That the county commissioners were negligent of their duties in the following particulars: In not giving explicit instructions as to the management of the institution, both the almshouse and the asylum; in not examining carefully and fully into all the details of the management of both of these departments, and remedying the defects that might have been readily ascertained by them; in not providing fire escapes, which they might have done, to a greater or less extent, without a special appropriation for that purpose; in not furnishing suitable means for promptly liberating the inmates from their cells, the testimony showing that several different keys were required to unlock the doors; in dividing the responsibility of the management of the institution, on account of personal differ-

ences between Mr. Demeritt and Mr. Driscoll, instead of discharging one or both and employing one competent man to take their places.

Seventh. That prior boards of county commissioners were guilty of official negligence, in not recommending to the county delegation such improvements and changes as were necessary to the best interests of the institution, and for not taking action themselves as far as their authority extended under the law.

Eighth. That all previous county delegations have been guilty of allowing to exist, and of maintaining, after having been officially warned of its condition in 1883, a building for the use of the insane which was totally unfit for the purpose, and at which has existed, at all times, the terrible danger from fire, which finally destroyed it, with an appalling loss of life.

Ninth. In investigating the rumors of intoxication connected with the institution, the board found that Mr. Demeritt has, for a short period, been addicted to the use of chloral; and that, in consequence of the use of that drug, his efficiency was perhaps somewhat impaired,—but this had no bearing upon the question of the fire; that, so far as Mr. Driscoll is concerned, it appears, from his own testimony and that of others, that several times within a year he has been given to the excessive use of intoxicating liquor, and on one occasion, at least, was gone from the institution two and a half or three days, leaving nobody, except his wife, in charge of the asylum during that time. There was no evidence showing that he ever drank at the institution. The evidence further shows that two of the employés of the institution had been seen in a condition of partial intoxication.

The system of caring for the county insane is the same in all counties, differing only in some minor details. It was not originated through carefully matured plans, after due consideration of the requirements of the insane, but it

was the outgrowth of a forced necessity, the guiding principle of which has been to house, clothe, and feed this unfortunate class at the smallest possible expense to the county. To this end, few provisions have been made for anything beyond the brute necessity of life. The principle that the insane should always be regarded as sick persons, who require expert medical treatment and special care with reference to surrounding influences, has not been taken into consideration in caring for our insane poor. Insanity is now recognized by the highest medical authorities as a disease, possessing an infinite variety of symptoms and manifestations, and requiring the most scientific, competent, considerate, and careful treatment and management. This more humane and logical method of treating the insane has been so frequently demonstrated to be the best and most successful, even among the so called chronic class, that the most skeptical have only to search the records to be convinced. It is through failure of legislative bodies to recognize the fundamental fact, that insane persons are sick persons, that no better treatment has heretofore been provided.

The system under which the county insane are now cared for is lamentably defective, inasmuch as the only authority legally qualified to make these institutions what they ought to be has little or no knowledge of the requirements necessary to the most modern and humane methods of providing for this class. The county delegation, upon which rests the power to appropriate money for these institutions, and to fully equip them in accordance with modern methods of managing the insane, too often—in fact, generally—fail to study and to understand the needs of our asylums.

Among the defects which may be mentioned under the present county system are,—

First. Lack of suitable buildings. In several of the counties of the state this statement admits of no qualifica-

tion, the buildings used being unfit *in toto*. In other counties this criticism may not be so forceful, so far as the buildings themselves are concerned; but when the matter of classification is taken into account, proper and ample facilities are not to be found at any of the county institutions.

Second. No classification of patients. This is a radical defect in every county of the state. The custom of grouping together in one ward all the different classes of the insane, from the simplest case of delusional insanity to the most violent case of acute or chronic mania, is in itself a sufficient condemnation of the method.

Third. Lack of skilled attendants. For the proper care of the insane it is necessary that attendants more or less skilled in the care of, and possessing a knowledge of the characteristics of, this class of patients is essential. Moreover, insane persons should at all times be under the watchful supervision of some attendant, a requirement not fulfilled at our county almshouses.

Fourth. Lack of expert medical and surgical treatment, which cannot be readily obtained at our county institutions.

Fifth. Lack of occupation and entertainment for the patients—features highly essential in the treatment of the insane.

In this same category many other defective conditions pertaining to our county asylums might be mentioned.

RECOMMENDATIONS.

First. That the state assume entire support, control, and management of the insane, and that county asylums for the insane be abolished.

Second. That all buildings hereafter constructed, to be occupied as almshouses, asylums for the insane, jails, and orphans' homes, shall be built of brick, iron, or stone, with partitions of fire-proof or slow-burning material, the plans

and specifications to be first approved by the State Board of Health, or such other authority as the legislature may direct.

Third. That the State Board of Health (or some other state authority) shall make at least annual inspections of such institutions, and shall have mandatory powers in all matters relating to the protection against fire, drainage and sewerage, ventilation of buildings, and other matters pertaining to the health and safety of the inmates, and all orders upon these matters shall be executed or carried into effect by the county commissioners or other legal authorities in charge.

Fourth. That we believe it to be for the best interests of all county institutions, that the law should be so amended that one county commissioner be elected biennially, so that all members of the board shall not go out of office simultaneously, as often does occur under the present law.

We believe the foregoing recommendations to be for the best interests of the state, and we are prepared to support them, and to give our reasons therefor before any legislative committee.

JOHN B. SMITH,
E. G. EASTMAN,
JAMES A. WESTON,
G. P. CONN,
JOHN J. BERRY,
IRVING A. WATSON,
State Board of Health.

THE PREVENTION AND RESTRICTION OF EPIDEMIC DISEASES.

The last legislature enacted a law to prevent the introduction of epidemic diseases into the state, which confers upon the State Board of Health certain powers which it did not before possess. It places the quarantine authority entirely in the hands of the board. The scope of the law is a wide one, and would seem to be adequate to any exigency that can possibly arise. It empowers the board to declare a quarantine; to make all necessary quarantine regulations; requires local health officers to enforce the regulations; permits the appointment of inspectors; creates an epidemic fund; and, in fact, gives the board practically unrestricted power to deal with epidemic diseases in such manner as it shall deem to be for the best interests of the people of this state. The following is the law:

THE STATE OF NEW HAMPSHIRE.

AN ACT TO PREVENT THE INTRODUCTION OF EPIDEMIC DISEASES INTO THE STATE.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION I. The power to establish quarantine in this state shall be vested in the state board of health, and said board, whenever it is regarded necessary to prevent the introduction of cholera, small-pox or other epidemic diseases from another state, or from another country, and to restrict said diseases if introduced, shall have the power to establish quarantine stations at such places as may be deemed necessary, and the said board shall make and enforce such quarantine rules and regulations as it may deem best for the public good, said rules and regulations to be in force when approved by the governor of the state.

SECT. II. It shall be the duty of the local health officers, in their respective towns, to enforce all rules and regulations issued by the state board of health; but should it become necessary to establish quarantine stations, for the purpose of detention, isolation, disinfection, etc., the expense of the same, and its maintenance, shall be paid from the epidemic fund of the state. Local boards of health may establish quarantine in their respective towns, but shall report immediately such action to the state board of health; and it shall be the duty of said board, as early as practicable, to ascertain the necessity of such quarantine, and shall either approve and enforce the said quarantine, or declare it raised.

SECT. III. Whenever quarantine is declared, all railroad and steamboat corporations, and the owners, consignees, or assignees of any railroad, steamboat, stage, or other vehicle used for the transportation of passengers, baggage, or freight, shall submit to the quarantine rules and regulations established by the state board of health; they shall submit to any examination required by the health authorities, respecting any circumstance or event touching the health of the crew or passengers, and the sanitary condition of vehicles, baggage, or freight; and any person who makes a false declaration respecting the points under examination, or who violates the quarantine rules and regulations, shall, upon conviction thereof, be fined not more than two hundred dollars, or be imprisoned not more than six months, or both.

SECT. IV. If, in the opinion of the state board of health, it should be necessary to employ inspectors, more effectually to accomplish the object of this act, the said board shall have the power to appoint competent persons for that duty; said inspectors to be paid a reasonable per diem for the time actually employed on said duty, and their necessary expenses, to be paid out of the epidemic fund of the state.

SECT. V. The sum of ten thousand dollars is hereby appropriated as an epidemic fund, to be used, if necessary, by the state board of health, with the consent of the governor and council, in case of the invasion, or threatened invasion, of cholera, small-pox, or other epidemic diseases into the state, and for the purpose of carrying out the provisions of this act; and the governor is hereby authorized to draw his warrant for the same, or such part of the same as may be needed, out of any money in the treasury not otherwise appropriated.

SECT. VI. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect on its passage.

Approved March 22, 1893.

Under the provisions of Section I of this, the board issued the following regulations, which were approved by the governor of the state May 22, 1893:

RULES AND REGULATIONS.

Adopted by the State Board of Health, under the Law Passed by the Legislature at the January Session, 1893, Entitled,

"AN ACT TO PREVENT THE INTRODUCTION OF EPIDEMIC DISEASES INTO THE STATE."

ARTICLE I. Every physician practising medicine in this state shall report at once to the local board of health, every case of cholera, small-pox, typhus fever, yellow fever, diphtheria, membranous croup, scarlet fever, typhoid fever, and measles, coming under his care or observation.

ART. II. Whenever any householder knows or has reason to believe that any person within his family or household has either of the diseases named in Article I, he shall, within twenty-four hours, if no physician is in attendance, give notice thereof to the local board of health of the town or city in which he resides, and such notice shall be given either verbally to one of the health officers, or by a communication addressed to the board of health and duly mailed within the time specified.

ART. III. Local boards of health, upon being notified of the existence of any of the diseases named in Article I, shall immediately placard the infected house in a conspicuous manner, and effectually isolate the case (and the family if deemed necessary), in accordance with instructions already issued, or that may be issued, by the state board of health. Upon the appearance of either or any of the first four mentioned diseases, the local board of health shall immediately notify the state board of health by telegraph. Local boards of health may establish temporary quarantine, as provided in section 2 of the law approved March 22, 1893, entitled "An act to prevent the introduction of epidemic diseases into the state." In

the event of the appearance of a case of cholera or suspected cholera, the local board of health shall establish *at once* an absolute quarantine, guarding the infected premises, by officers, day and night until relieved by the state board of health.

ART. IV. Upon the appearance of either of the diseases named in Article I, in any town or city in the state, the local board of health shall make an immediate report of the same to the state board of health, upon blanks furnished for that purpose, and shall thereafter make a weekly report as long as the disease continues, in accordance with the requirements of the blanks.

ART. V. Maritime quarantine at the port of Portsmouth shall be enforced in accordance with the quarantine rules and regulations of the city of Portsmouth, subject to such rules and regulations as the state board of health may issue under the provisions of the law approved March 22, 1893, entitled, "An act to prevent the introduction of epidemic diseases into the state."

ART. VI. Isolation and disinfection must, in all cases, be carried out in accordance with instructions already furnished to local boards of health.

ART. VII. Inspectors appointed by the state board of health shall have the right to enter any building, enclosure, railway train, vessel, or other place, that they may deem necessary in the performance of their duties, under the instructions and orders given them by the state board of health, and in accordance with the law of the state.

ART. VIII. If, in the judgment of any officer or agent of the state board of health, it should become necessary to issue special rules or orders to meet promptly any condition or emergency, the said officer or agent may issue such rules or orders in writing, and a copy shall be transmitted immediately to the state board of health, to be acted upon as the said board may determine; but pending the decision of the board, said rules or orders shall be operative.

ART. IX. The state board of health may at any time issue special rules and regulations for the purpose of more effectually carrying out measures to restrict the importation or spread of infectious and contagious diseases, which rules and regulations shall be considered a part of the quarantine rules and regulations, as provided for under the law entitled "An act to prevent the introduction of epidemic diseases into the state."

ART. X. Local boards of health are directed to exercise a watch-

ful supervision over the sanitary condition of their respective towns and cities, and to abate promptly any nuisance dangerous to the public health. It shall be the duty of local boards of health to make frequent sanitary inspections, and also to investigate without delay, any and all complaints, either written or verbal, relating to unsanitary conditions. Local boards of health shall see that public buildings, railway stations, schoolhouses, etc., are at all times kept in a good sanitary condition.

ART. XI. Local boards of health are instructed to examine carefully into the condition of public water-supplies and their watersheds, and as far as practicable to cause to be removed any and all conditions contaminating or liable to contaminate such supplies. During the summer months frequent examinations and inspections should be made.

ART. XII. Any person or corporation violating the rules and regulations issued by the state board of health shall be subject to a fine of not more than two hundred dollars, or be imprisoned not more than six months, or both, and it shall be the duty of any person to whom a knowledge of such violation may come to notify the state board of health.

ART. XIII. Local boards of health are directed to furnish a copy of this circular to every practitioner of medicine in their respective jurisdictions.

GRANVILLE P. CONN, *President.*

APPROVED: IRVING A. WATSON, *Secretary.*

JOHN B. SMITH,
Governor.

Concord, N. H., May 22, 1893.

Copies of the law, rules and regulations, placards, blanks, circulars, etc., were transmitted to every local board of health in the state, accompanied with the following letter:

OFFICE STATE BOARD OF HEALTH.

CONCORD, May 6, 1893.

To the Local Board of Health:

We inclose herewith copies of the law, rules and regulations for the restriction and prevention of epidemic diseases, etc., in accord-

ance with an act of the legislature of 1893. Also suitable blanks upon which to report certain diseases, in accordance with the rules and regulations mentioned, together with copies of placards to be used.

You will observe that the law and the regulations are in some respects a new departure in this state, and any violation of the same will be attended with heavy penalties.

Form 1 is for the use of physicians or other persons in reporting the diseases named in the regulations.

Form 2 is for local boards of health to report the *first* case of either of the diseases named to the state board of health.

Form 3 is for *weekly* reports to the state board of health *during the prevalence of the disease*, instead of monthly reports as heretofore, and the old blanks should no longer be used.

You are respectfully requested to distribute a copy of the rules and regulations to each physician in your town or city, together with a few copies of blank Form 1; also to report promptly to this board any violation of the law.

If there is any point in these rules and regulations or in the blanks that is not perfectly plain, we shall be glad to give you all the information necessary to explain the same. We can furnish your board at any time circulars relating to the prevention and restriction of diphtheria, scarlet fever, typhoid fever, and cholera, and we shall very soon issue a circular relating to the prevention and restriction of measles. After this date local boards of health are directed to placard houses infected with measles and to prohibit the children from such houses from attending the public schools, and they must enforce such isolation as they deem necessary to prevent the spread of the disease.

Per order,

IRVING A. WATSON,
Secretary.

Before any successful attempt can be made to restrict the spread of a disease, it becomes necessary to know of its existence; therefore it is required that each physician shall report every case of cholera, small-pox, typhus fever, yellow-fever, diphtheria, membranous croup, scarlet-fever, and measles, coming under his observation, to the local

board of health. A violation of this rule is punishable by both fine and imprisonment. The necessity of such a regulation, as a part of the general plan of action in suppressing a given disease, is at once apparent.

The regulations referred to were promulgated to local boards of health about the first of June, accompanied by blank notifications for physicians' use, and also with the necessary blanks for local boards to make returns to the state board, in accordance with article ten of the regulations.

The following blank for physicians' use was furnished in sufficient quantities to local boards of health, for the requirements of their respective localities:

[Form 1.]

THE STATE OF NEW HAMPSHIRE.

REPORT OF CASES OF CONTAGIOUS DISEASES.

Maximum penalty for failure to report cases of Cholera, Small-pox, Typhus Fever, Yellow-Fever, Diphtheria, Membranous Croup, Scarlet-Fever, Typhoid Fever, and Measles, $200, six months' imprisonment, or both.

Names of Patients.	Sex.	Age.	Residence.	Disease.

Places where children from these houses attend school.....

.....

Where and how disease originated.....

.....

☞Report every case, whether in the same family or not.
☞Send or mail this promptly to Sec. Local Board of Health.

Name of person reporting.....

P. O. address and date.....189

The local board of health was instructed, upon receiving notice of the *outbreak* of any of the diseases named in article one, to immediately report the same to the State Board

of Health, upon a special blank (form 2) furnished for that purpose :

[Form 2.]

REPORT OF OUTBREAK OF A COMMUNICABLE DISEASE.

To be mailed to the secretary of the State Board of Health, Concord, N. H., immediately on the occurrence of a first case of cholera, smallpox, typhus fever, yellow fever, diphtheria, membranous croup, scarlet fever, typhoid fever, and measles.

To the Secretary of the State Board of Health :

Sir,—There is to my knowledge a case of.....
(Name of disease.)

.....in.....
(Town, city, or village.)

The first person sick is.....

a....., about.....old, who was taken sick with
(Male or female.) (Age.)

this disease on the.....day of....., 189 . The
(Month.)

number of cases which have already occurred is.....

The danger of the spreading of the disease is.....
(Great, not great, etc.)

for the reason that.....

.....

Precautionary measures.....
(Will be taken, have been taken, or are sug-

.....as follows:....
gested to the State Board of Health, as the case may be.)

.....

.....

Signature,.....

.....

.....
(Whether Health Officer, or Secretary of local Board of Health.)

.....189 .
(Post Office Address.) (Date.)

(Please fill the blank spaces in this notice if possible, but having learned the name of the disease, do not delay sending the report in order to learn other facts provided for in this blank.—Sec. State Board of Health.)

In addition to reporting to the state board the *first appearance* of any of the diseases mentioned, a *weekly report* is required from the local board so long as any one of the diseases continues. The weekly report to be rendered upon the following blank (form 3):

[Form 3.]

THE STATE OF NEW HAMPSHIRE.

WEEKLY REPORT DURING THE PREVALENCE OF A COMMUNICABLE DISEASE.*

To the Secretary of the State Board of Health, Concord, N. H.:

Sir:—The following is a report of all known cases of diseases named below, in....., N. H., during and at the close of the week ending Saturday.....189 .
(Date.)

Names of Diseases.†	Number of sick at last report.	During the week, Number.			Number sick at close of week.	Number of infected houses.
		Taken sick.	Recovered.	Died.		
DIPHTHERIA.....	.....	.....	.....	.....	.....	.....
MEMBRANOUS CROUP ...	.....	.....	.....	.....	.....	.....
SCARLET FEVER.....	.....	.....	.....	.....	.....	.....
TYPHOID FEVER.....	.....	.....	.....	.....	.....	.....
MEASLES	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....

*The health officer or secretary of each local board of health in New Hampshire is respectfully requested to forward a report on this blank to the State Board of Health, Concord, N. H., promptly after the close of each week during any portion of which a case of the diseases named in this report has been present within the jurisdiction of his board.

†Add to this list the name of such a disease as small-pox, cholera, yellow fever, typhus fever, etc, whenever it occurs.

What action has your board taken?.....

.....

.....

.....

.....

.....
(Signature.)

.....
(Health Officer or Secretary of Local Board of Health.)

.....
(Post-office Address.)

.....
(Date of making this report.)

If this is the last blank (Form 3.) that you have, make a cross against this sentence and more will be sent you.

It is believed that this system of notification is as nearly perfect as can be devised, and if carried out to the letter would give the health authorities, state and local, a full and complete knowledge of the prevalence of these diseases, and thereby lead to their prompt isolation, control, and suppression. As a matter of fact, there is one obstacle in the way of a complete enforcement of this plan of sanitary work, and that consists in an occasional passive, inefficient, incompetent local board of health. We see no way under the present law to remedy this serious organic defect. As a rule, however, the regulations have been complied with, and most excellent work has been done by many local boards in restricting the spread of these preventable diseases, to the undoubted saving of many lives, especially among children, from diphtheria and scarlet-fever. The prompt and efficient work that has been done by some of our local boards abundantly demonstrates the character of the work that might be done by every board in New Hampshire.

DIPHTHERIA.

During the year ending Oct. 31, 1893, diphtheria was reported to this board from thirty-two towns, with a total of one hundred and eighty-six cases. By comparing the returns thus made by local boards of health with the mortality rates from this disease for several years past, it is evident either that diphtheria has prevailed to a much less extent than heretofore, or else notification has been very incomplete. We feel certain that all cases have not been reported. The law which requires weekly returns did not in fact become operative until about the first of June, while the old regulation requiring monthly returns was not heeded by all towns. At this point, we wish to call the attention of health officers, physicians, and others to whom the law of notification refers, that we shall demand the prosecution of any and all wilful violations of this law. Human life must not with impunity be trifled with through a neglect to do what the law requires in an endeavor to prevent and restrict the spread of dangerous communicable diseases. No law is of use unless it is enforced. The object of notification is to reveal to the health authorities, local and state, the location of every case, as early as possible, that the necessary restrictive measures may be taken to prevent a further extension of the disease. The actual sanitary management of the diseases specified in the regulations devolves upon the local boards under the public statutes and the regulations of the state board of health.

The law requires that the attending physician shall report immediately every case of diphtheria (and membranous croup) to the local board of health. The local board of health upon receipt of such information, should act *at once* by making a determined effort to restrict the disease.

1. Promptly investigate the matter in person and put the following placard (furnished by the State Board of Health) upon the infected premises in a conspicuous position, so as to warn the public against entering:

DIPHTHERIA.

All persons are strictly forbidden to enter or leave these premises without special permit from the Board of Health.

All persons are strictly forbidden to remove this card without orders from the Board of Health.

Any violation of these regulations will be punished to the fullest extent of the law.

BOARD OF HEALTH.

2. Order prompt and thorough isolation of those sick or infected with diphtheria, *and see that this order is enforced.*

3. See that no person suffers for want of attendants or supplies.

4. Notify the people in the vicinity by printed notice or otherwise, so that the infected place may be avoided.

5. Notify teachers and superintendents of schools concerning families in which there are cases of diphtheria.

6. Prohibit public funerals of persons dead from diphtheria.

7. See that rooms, clothing, premises, and all articles likely to be infected, are disinfected before allowing them to be used by persons other than those in isolation.

8. Report to the State Board of Health every case, upon blanks furnished all local boards for that purpose.

Also send for as many copies of "Diphtheria: its Restriction and Prevention" as can be profitably distributed in the community where the case or cases exist. This pamphlet also contains explicit directions and instructions to local boards of health, regarding the management of the disease, disinfection, etc.

The communicable nature of this disease is often very marked, although there are still some people who ignorantly or erroneously believe to the contrary. One of the many

instances of this kind may be cited. A young man in Bow came home ill with diphtheria; result: Seven cases developed in his family, three of which were fatal. A woman living in Canterbury visited the afflicted family, and conveyed the disease to her home, with the terrible consequence of destroying the lives of her three children. A further spread of the disease in both of the instances mentioned, was doubtless prevented only by the prompt and efficient action of the health authorities. Many instances of this kind could be given, but it seems hardly necessary to further emphasize a fact that is not even open to controversy among those who have studied the nature and history of this terrible disease. The methods by which the germs of diphtheria are distributed are as numerous and varied as those of scarlet fever, although the former disease is not so actively communicable as the latter, as a rule.

At the late International Medical Congress the question was asked: "How long can a diphtheritic patient furnish infectious excretions?"

In reply to this, it was stated that excretions were found infectious *three weeks after apparent recovery, and pieces of membrane yielded cultures fourteen weeks after discharge from the throat.* Children having had the disease should therefore be kept from school for at least four weeks after recovery, and every article of apparel worn by them should be thoroughly disinfected. *All doubtful cases of throat disease should be treated as diphtheritic until the contrary is clearly shown.* By this means a danger would be averted that under any other course might be imminent.

DIPHTHERIA SPREAD BY INFECTED MILK.

Early in June last, diphtheria made its appearance in Portsmouth, and the mayor requested the State Board of Health to investigate the matter. Dr. Berry, a member of the board, conducted a careful investigation, and reported as follows:

PORTSMOUTH, N. H., June 16, 1893.

Dr. I. A. Watson,

DEAR BROTHER: In regard to the threatened epidemic of diphtheria in Portsmouth which the board have been requested to investigate, I would make the following report: The fact that the disease, which first appeared about ten days ago, appeared suddenly and was distributed quite evenly over the city, and was confined to the patrons of Mr. Leavitt, a milk-dealer of Newington, at whose house a case of diphtheria existed, rendered the theory of propagation by infected milk a very plausible one. The man Richardson was reported sick June 6, and died, I understand, June 12th, of a very severe type of the disease. The fact was not brought to the notice of the board until June 12th, the day of his death, when the selectmen of his town were directed to quarantine the premises, pending further investigations. A personal examination was yesterday made of the farm and stock. The latter, consisting of twenty-three cows, was examined by Dr. I. R. Kimball, V. S., and found to be in a healthy condition. There was no apparent contamination of the water-supply. This latter is obtained from a spring forty rods or more from the buildings, and sent into the latter by a hydraulic ram. There are no wells on the farm. The drainage is fairly good. Sink waste is carried by lead pipes (untrapped) into wooden drain leading into an open cesspool one hundred feet or so below the house. Overflow pipes of two small storage tanks of drinking-water in house lead into these waste pipes. The drain, however, is thoroughly flushed each day, and its lower section, leading into cesspool, is uncovered. This did not appear to me to be exerting any harmful influence. Fumigation of the premises had already been completed.

The history of the case, as gathered from the inmates and others, showed that Richardson had undoubtedly been sick for a day or two prior to taking his bed. This man had sole charge of the milk, and was in the habit of

washing all the cans as well as distributing milk to the customers. The first case in Portsmouth did not occur until after the man had been taken sick and the disease has continued to develop slowly up to the present time. There have been in all sixteen or seventeen cases, nearly all of which had partaken of the milk in question, but, as a rule, had held no communication with the man who delivered it. There has been but one death in this city thus far, and the majority of the cases have been of mild type. One child continued to drink freely of the infected milk during its entire illness. The latter was of a rather severe type, but the patient is now convalescent. Among several of Mr. Leavitt's customers there have been instances of severe sore throat without any diphtheritic exudation whatever.

Instructions were given regarding the disinfection of the premises, the bedding, and the milk cans, and the delivery of the milk was prohibited until the board raises the quarantine upon the farm.

Yours truly,

JOHN J. BERRY.

An inspection of the farm of John H. Leavitt of Newington, made June 17, 1893, by this board, establishes the following facts:

"The sanitary condition of the house and farm buildings was fairly satisfactory.

"The water supply was pure and abundant, and with the exception of a few minor defects in plumbing, the drainage was fully up to the average.

"The live-stock was examined by a veterinary surgeon and pronounced absolutely free from disease.

"In the opinion of the board, the infection of the milk resulted from a case of diphtheria which occurred at the farm a few days prior to the epidemic, and which terminated fatally on the twelfth of the present month.

"The proper sanitary measures recommended by us having been carried out by Mr. Leavitt, the milk furnished by him

is, in our judgment, no longer infectious, but may be safely used by his customers.

"JOHN J. BERRY, M. D.,

"Member of State Board of Health, Portsmouth, N. H., June 21, 1893."

The distribution of diphtheria by infected milk is a matter of record in more than one locality during the present year.

Dr. Hunt, medical inspector of the New Jersey State Board of Health, has reported[1] upon the outbreak of diphtheria occurring at Hightstown in that state. He found that eighteen out of the twenty cases investigated, were in families supplied by the same milkman, in whose employ was a lad suffering from diphtheria, but at work in the dairy. The general sanitary condition of the town was good, and had no part in the epidemic.

[1] B. M. and S. Journal, August 10, 1893.

DIPHTHERIA AND MEMBRANOUS CROUP.

Under date given below, the following circular was issued to the local boards and physicians of New Hampshire:

STATE OF NEW HAMPSHIRE.

STATE BOARD OF HEALTH.

MEMBRANOUS CROUP.

Membranous croup will hereafter, in New Hampshire, be included in the list of quarantinable diseases. It will be the lawful duty of physicians to report every case of membranous croup to the local board of health, in accordance with the rules and regulations established by the State Board of Health, under the law entitled "An act to prevent the introduction of epidemic diseases into the state." Local boards of health, upon receiving notice of a case of membranous croup (or diphtheritic croup), will at once proceed to take official charge of the case, in the same manner and under the same rules and regulations as in cases of diphtheria.

Many observers now believe in the pathological identity of membranous croup and diphtheria. At all events it is much the safer course to regard all throat and laryngial conditions accompanied by membranous deposits as diphtheria, and to exercise the same sanitary precautions that are required in the management of the latter disease. The frequent appearance of diphtheria and membranous croup simultaneously, in the same family or community, is one evidence of the identity of the two conditions. The death returns in New Hampshire for the past eight years, show that upon the average, "croup" causes one half as many deaths as diphtheria, appearing simultaneously with the latter and under the same local conditions and circumstances. The infectious character of membranous croup (laryngial diphtheria) has been witnessed by many observers. It therefore becomes the duty of physicians and health

officers to take the same sanitary precautions in a case of membranous croup that they are instructed to observe in a case of diphtheria.

Local boards of health must quarantine every case of membranous croup reported, placard the premises, prohibit public funerals in cases of deaths from this disease, see that at the proper time disinfection is carried out—all in accordance with the instructions embraced in a circular issued by the State Board of Health, on the "Prevention and Restriction of Diphtheria."

IRVING A. WATSON,
Secretary.

Concord, N. H., June 1, 1893.

The following is a copy of the placard authorized, and which will be furnished local boards of health upon application. A copy has already been forwarded to every board in the state:

MEMBRANOUS CROUP.

All persons are strictly forbidden to enter or leave these premises without special permit from the Board of Health.

All persons are strictly forbidden to remove this card without orders from the Board of Health.

Any violation of these regulations will be punished to the fullest extent of the law.

BOARD OF HEALTH.

So far as preventive measures are concerned, there should be no distinction beween diphtheria and croup. Indeed, it is the writer's opinion that there is no difference whatever between the two, except in local symptomatic manifestations—that pathologically the so called membranous croup is true diphtheria. Dr. C. R. Early, of Pennsylvania, in a paper presented to the American Medical Association upon Croup, says,—

Dr. William Cullen calls this disease "Cynanche Trachealis."

"This name has been given to an inflammation of the glottis, larynx, or upper part of the trachea, whether it

affect the membranes of these parts, or the muscles adjoining. It may arise first in these parts, and continue to subsist in them alone; or it may come to affect these parts, from the cynanche tonsillaris or maligna spreading into them. In either way it has been a rare occurrence, and few instances of it have been marked and recorded by physicians. It is to be known by a peculiar ringing sound of the voice, by difficult respiration, with a sense of straitening about the larynx, and by a pyrexia attending it."

We will now refer to the writings of Bartholomew Parr, M. D.[1]

ANGINA TRACHEALIS.

"In compliance with Doctor Johnson and consonantly with our observations in a former article, we mention this species as a separate one, and distinct from that sometimes comprehended under this title by other authors.

"The croup we shall consider under the appellation of angina stridula, and confine the present term to the malignant angina, extending to the trachea, or to that species of the disease in which the larynx and trachea are originally attacked. To this complaint authors have not, perhaps, paid due attention; it is indeed seldom an original disease; yet, within our observation, it has appeared to be so. It is truely an erysipelatous inflammation in contradistinction to the phelgmonic; nor does it materially differ in its treatment from putrid pneumonia, or angina maligna. We need not in such instances dread the power of the bark in inducing dyspnœa, but employ it freely with cordials. The only question is, whether blisters are more admissible or more effectual? From our own experience we cannot encourage their application; but they certainly do no harm."

ANGINA STRIDULA.

"This is the cynanche trachealis of Cullen; a disease that, for its singularity and fatality, has fixed the attention

[1] Parr's Medical Directory, D. D. 1808. Vol. 1, pp. 119-120.

of pathologists and practitioners. We wish we could solve the difficulties, or direct a more scientific or successful method of cure than has hitherto been adopted.

"The angina stridula is also called angina, membranacea, interna, perniciosa, polyposa, catarrhus, suffocativus, and morbus strangulatorius. It is chiefly a disease of children, and is distinguished by a difficult inspiration sounding as through a brass tube, harsh cough, with seldom any tumor in the throat, and no difficulty in swallowing. This definition differs from that of Dr. Cullen, who is a little warped by his adherence to system.

"A cold and a short cough precedes for some days, when the harsh breathing comes on, with little or no fever; sometimes suddenly, at others more gradually, increasing by degrees, till suffocation closes the scene.

"The disease consists of a membranous substance, lining not only the trachea above its divarication, but also its minutest branches, though the large parts of the tube are first affected. It has been considered as a spasmodic disease by some, as it attacks suddenly, and is relieved by warm baths and asafœtida, and as inflammatory by others, who rest with equal security, on the cough preceding, and the utility of bleeding."

John Mackintosh, M. D., "Practice of Physic," (First American from Third London Edition, A. D., 1834, Vol. I, pp. 277 to 285), gives the usual history of croup of those days. In his reference to the appearance on dissection, he says:

"On opening the trachea, false membrane is found lining the organ in various states; sometimes it is soft and diffluent; sometimes partial; at others extending beyond the bifurcation. Sometimes it is found of very considerable thickness and firmness, of a tubular form, corresponding exactly with the canal which it covers, and extending an inch or two into the bronchi; on some occasions, the first divisions of the tubes are as completely lined as the trachea. Frequently the larynx is similarly affected."

We also give an extract of what he says as to treatment:

"This is a disease of all others which requires promptness of decision, and activity in practice; for if false membrane be allowed to form, not above one case in the hundred will be saved. The worst cases are those in which a sore throat has been neglected, and the inflammation has spread into the windpipe; or those in which patients have labored under bronchitic symptoms for a week, or perhaps more, before the disease has affected the trachea and larnyx, under which circumstances, a recovery is rather to be considered as an escape, than as an event to be expected."

We have thus quoted some extracts from the writings of Dr. William Cullen under the name of cynanche trachealis, and Bartholomew Parr, M. D., who refers to Cullen, and uses the name angina trachealis, but considers the croup under the appellation of angina stridula, etc. Also from the "Edinburgh Practice of Physic," Dr. John Eberle, "Practice," and from John Mackintosh, M. D., "Practice of Physic," and all these authors describe to us in their writings on croup, the disease we call diphtheria in some of its forms.

Morell Mackenzie, M. D., of London, in his very valuable works on the throat, nose, pharynx, larynx, trachea, œsophagus, nasal cavities, and neck, fully describes croup under all its names, and gives a full history of it, and proves it beyond a doubt, to be one form of diphtheria. He quotes many of the most prominent authorities to prove his position.

We find proof of the identity of croup and diphtheria in the practice and writings of such authorities as Dr. Mackenzie, whose opinion is respected and quoted as authority, in all parts of the world; also, Drs. Hillis, Semple, and Virchow, who only yielded to the principle advanced that diphtheria and croup were identical, after a long and thorough investigation.

Dr. George Jackson, *British Medical Journal*, Feb. 19,

1870, pronounced diphtheria and croup identical. Sir William Jenner, *Lancet*, Jan. 2 and 16, 1875, gave his adhesion to this doctrine. The renowned Doctor Traube, of Germany, also had accepted the unity theory.

We might quote authorities filling pages to prove the identity; but it is a question that each practitioner can settle in his own mind. My experience in an extensive practice since the fall of 1846, has proved beyond a doubt in my mind, that croup is only a form of diphtheria.

I will here quote an article from the May number of the *Medical World*, Vol. VIII, No. 5, page 181:

"'Croup' is confined to the air-passages alone. A form of croup attacks the urethra sometimes, and is indicated by the excretion of characteristic white membranous structures, mixed with more or less blood and pus. Croup of the bladder is more frequent in females, the membranous substance being reddish in color, and in much larger pieces.

"This statement is correct as to cases of diphtheria. The membrane may be found covering any part of the mucous membrane, mouth, nose, fauces, trachea, bronchia, stomach, bowels, kidney, urethra, rectum, and vagina. I have at this time a small box of the membrane taken from the vagina. I also have had cases where wounds on any part of the body where the cuticle was removed were covered with this fungi. I call these cases *diphtheria* and not *croup*. All of which is respectfully submitted."

Dr. J. F. Kennedy, secretary of the Iowa State Board of Health, in a recent issue of the *Monthly Bulletin*, says:

The Iowa State Board of Health, eighteen months or two years ago, declared officially that for the purposes of quarantine, diphtheria and membranous or true croup, should be regarded as identical. This action seemed eminently proper, and in the interest of the public health. Perhaps all members of the board were not fully convinced

in their own minds that the identity of these diseases had been satisfactorily demonstrated.

In Hare's System of Practical Therapeutics, just issued, is a chapter, the title of which heads this article, contributed by J. Chalmers Cameron, M. D., M. R. C. P. I., of Dublin, Ireland. Professor Cameron was one of the most distinguished members of the late international congress of health and demography, held in London, and his views and opinions, as expressed on several occasions, received marked and merited attention.

On the question of the identity of what was formerly, and is yet by many, regarded as two diseases—diphtheria and membranous croup, he says, page 484, Vol. II:

"Diphtheria and croup are identical. Though their identity has not yet been proven scientifically, yet clinically and practically the balance of evidence is in favor of this view. Those physicians who believe that true croup is diphtheria and contagious, and who base their treatment upon this belief, will succeed in saving life and limiting the spread of the disease, when those will fail who soothe their own consciences and comfort anxious relatives and friends with the declaration that croup is a local inflammatory and non-contagious disease, and neglect isolation and disinfection accordingly. If there is still a doubt we should not allow it to make us careless in our practice."

We are glad to see the action of our board so fully endorsed by one so eminent as a physician and sanitarian, and to have this endorsement a part of a text-book that will be read by thousands and accepted as authority.

The twenty-first annual report of the local government board (England), for 1891–2, contains a report on an investigation undertaken by Dr. Klein, F. R. S., on the relation of diphtheria to membranous croup.

Assuming that the Klebs-Loeffler bacillus is the true cause of diphtheria, and this fact is firmly established,

Dr. Klein, in selected cases of throat affections attended with membranous deposits, has determined the presence or absence of the *bacillus diphtheria.*

From this investigation Dr. Klein concludes—1st—That membranous deposits of the fauces occurring in the early stages of scarlet-fever, the so called scarlatinal diphtheria, are not diphtheritic, the bacillus being invariably absent. 2d—That the membrane formed in the throats of scarlet-fever patients following convalescence is diphtheritic, these being cases of true diphtheria; in such cases, either the pharynx or larynx and trachea may be affected. 3d—Membranous croup of the larynx and trachea concurrently with diphtheria of the fauces is *true* diphtheria. 4th—Membranous croup of the larynx and trachea, without diphtheria of the fauces, may be of two kinds: (*a*) True diphtheria with the presence of the bacillus, or (*b*) genuine fibrinous croup without the presence of bacilli, and, therefore, not (from this point of view) diphtheria.

While it may be possible, therefore, that cases of membranous croup may occur which are not diphtheritic, and hence not contagious, other cases are undoubtedly true diphtheria. And, as a biological examination will be required to determine the exact character of each particular case, *all cases of membranous croup should be treated as diphtheritic*, and the same precautions taken as in other cases of diphtheria.[1]

The effect of establishing the identity of these two processes will not only aid the physician in a more rational treatment, but recognizing in every case of membranous laryngitis its true cause, and adopting early the precautions necessary to prevent its extension, both individuals and communities will be better protected, and we, as guardians of the public health, instrumental in saving many valuable lives.

[1] Monthly *Sanitary Record.*

Dr. John B. Roberts, in a discussion before the Philadelphia County Medical Society, February 10, 1892, says: "If I am called in surgical consultation to a child with difficult respiration due to some inflammatory disease of the throat, it makes little difference to me whether some pathologists call it croup and some diphtheria; I call them all diphtheria, and advise the attending physician to report the case as such to the board of health."

Dr. W. H. Dickerson, chairman of committee, Royal Medical Society, London, on diphtheria and membranous croup, reported, after thorough investigation, that they could distinguish no difference chemically, microscopically, or in etiology, that would justify them in classifying as two diseases.[1]

We find in the last number of the *Medical Mirror*, published at St. Louis by I. N. Love, M. D., an interesting preface by Dr. Love to an article from the *Medical News* upon the "Identity of Diphtheria and Croup." He says: "Many years ago, after a careful study of the arguments presented upon both sides of this question, I became convinced in favor of the thought that diphtheria and croup were identical, and as each year has passed, additional evidence has accumulated within my experience justifying this conclusion."

An abstract from the *Medical News*, as given by the *Medical Mirror*, says: "One of the most conclusive clinical arguments of their identity is afforded by the fact that in some of the large continental hospitals cases of croup and diphtheria are placed side by side in the same ward, and the cases of croup do not become infected; while it is not rare for diphtheria to develop in a family in which an apparent case of croup has been present."

For a confirmation of this latter statement, see pages 178 and 179 of May *Bulletin*.

The *Medical News* gives, as reported by Fraenkel, the

[1] Memphis *Medical Monthly*.

results of "autopsies in four cases, all clinically typical instances of croup, in two of which tracheotomy was performed. Examination of the membranes present in each case disclosed the presence of the bacillus of diphtheria described by Klebs and Lœffler, the identity of which was absolutely assured by the presence of morphologic appearance, by its behavior in culture, and by its pathogenicity to animals. It is true that the number of cases reported is small, but the evidence adduced is positive and conclusive, and not to be controverted by any negative evidence."[1]

Dr. Hermann M. Biggs has recently reported to the New York city board of health the result of bacteriological examinations made by him during the past four months in thirty-six cases of so called membranous croup. The mortality from this disease had increased to an alarming extent.

In all the cases examined, Dr. Biggs says the diseased membrane was confined almost entirely to the larynx. In thirty cases the Loeffler bacillus of diphtheria was abundantly present. Those, therefore, were really cases of laryngeal diphtheria. In six cases no Loeffler bacilli were found. These, therefore, he characterizes as cases of catarrhal pseudo-diphtheritic inflammation of the larynx, analogous to similar pseudo-membranous inflammations (non-diphtheritic) in the larynx. In five of the laryngeal cases, in which the Loeffler bacillus was found, cases of pharyngeal diphtheria both preceded and followed within a week in the immediate vicinity of the locality of the patient. In three other instances the cases of croup were preceded by cases of true diphtheria, and in seven instances were followed by cases of true diphtheria. In the remaining fifteen cases of membranous croup, pharyngeal diphtheria neither preceded nor followed in the immediate vicinity. None of the six cases of croup, in which no

[1] Monthly *Bulletin*.

Loeffler bacilli were found, was followed or preceded by cases of diphtheria. During the last four months nearly eighty-four per cent. of the cases of so called membranous croup, referred to the health department for bacteriological examination, have proved to be diphtheria.

In 1884 there were forty-nine deaths returned from "croup;" in 1885, seventy-four; in 1886, sixty-four; in 1887, eighty-four; in 1888, ninety-four; in 1889, eighty-eight; in 1890, sixty-four; in 1891, fifty-six.

Without doubt a great majority of these cases, if not all of them, were true diphtheria.

MEASLES.

The registration returns for the past seven years show that the average death-rate from measles in New Hampshire is greater than from scarlet-fever. This results from two causes: First, that the death-rate from the latter disease has been greatly reduced within a few years by the restrictive work of local boards of health. Second, that no efforts have been made to prevent the spread of measles. Believing that the mortality from measles may be considerably reduced, the board has included this disease in the list of those which the physician must report to the local board of health, while the latter must placard the infected house or apartment as follows:

MEASLES.

Any person having the Measles, however mild the case may be, and all persons in a family where Measles exist *except those who have had the disease*, are forbidden to attend school or any public or private gathering, or to mingle with persons who have not had the disease.

Persons who have not had the Measles are prohibited from entering these premises.

All persons are strictly forbidden to remove this card without orders from the Board of Health.

Any violation of these regulations will be punished to the fullest extent of the law.

BOARD OF HEALTH.

If every case of measles were reported, the premises at once placarded, and the above regulations strictly observed, there is no question but that the prevalence of the disease would be greatly reduced, with an equal reduction in its death-rate. That this disease can be entirely controlled

by our local boards of health is not to be expected, inasmuch as it is communicable in its prodromal stage—before a diagnosis can be positively made—but this peculiar characteristic of the disease is no reason why health officers should be any the less vigilant in attempting to restrict it, with the certainity before them that the spread of the disease may, by their efforts, be greatly restricted.

Measles is essentially a disease of early childhood. The longer children are protected from it the less the liability of contracting it. In New Hampshire over seventy-two per cent. of the deaths from this disease are among children under five years of age—thirty per cent. occurring in children under one year old. The mortality statistics of other states show substantially the same percentages.

Thomas says: "The age of the patients is, under all conditions, of the greatest influence upon the mortality of measles. Disregarding the fact that healthy and very young children (up to about the age of six months) probably from their feebler predisposition, are attacked very mildly, if at all, the rule may be laid down that measles is essentially dangerous only for young or very young children; that its danger decreases rapidly with the accession of years, and in the late years of childhood is already at a minimum; in old people who have, however, but little predisposition and are rarely attacked, the disease is again dangerous. Exceptions to this are not often reported."

William Squire (Quain's Medical Dictionary): "The catarrhal stage, infectious throughout, is often mistaken for a common cold, and no timely separation is attempted. The cough is an important means of conveying the infection at this time. . . . Infection begins before the rash appears, and the contagion may be given off by the third day, most probably during the greater part of the incubation period. The contagious principle, developed only in the bodies of the sick, is found during the height of the disease in the tissues, the secretions, the blood, and the

breath. After an attack of measles personal infection is probably over by the end of the month; it may persist longer, or be conveyed somehow by convalescents for another month. How long infection may cling to articles of clothing, or linger in closed rooms, is uncertain. On the fourth day of the initial fever the eruption appears and continues four days."

Wood's Reference Hand Book states: "Although the nature of the disease may be conjectured during the prodromal stage, it is only during the eruptive stage that the diagnosis of measles can be definitely determined. The danger of contagion is proportionate to the propinquity of the contaminating influence, being greatest in the sick-room. It cannot be denied that measles may be spread by mediate contagion. In such cases the clothing probably becomes the disseminating agent. . . . Except small-pox, measles is probably the most contagious of the exanthemata and is communicable from the early prodromal stage until desquamation is completed. The infectious properties are probably most active during the prodromal stage. The great difficulty of identifying measles during this stage in a great measure explains the rapid dissemination of the disease in schools, asylums, etc. The contagious properties continue throughout the stage of eruption, but speedily diminish with it and probably become extinct during desquamation."

I. N. Brainerd, M. D., of Alma, Mich., in a letter to this office bearing on this subject, dated March 8, 1890, states:[1] "Dr. Hardaway, professor of diseases of the skin in the St. Louis Post-Graduate School of Medicine and in the Missouri Medical College, St. Louis, and president of the American Dermatological Association, says: 'Various circumstances render it probable that measles is most readily propagated during the stage of efflorescence.[2] This being

[1]Report Michigan State Board of Health.

[2]Pepper's System of Medicine, Vol. 1, p. 560.

the case, the most infectious stage of the disease is not passed before the disease can be recognized and notice of its presence be given. It is true that measles is communicable during the four days of prodromal fever, during the five days of efflorescence, and during the five days (about) of exfoliation. Conceding that we can offer no protection during the first four days, shall we therefore offer no protection during the remaining ten days? . . . Hardway says: 'Leaving out of account sucklings under six months of age, in whom measles is rare and said to be slight, most deaths from the disease (measles) occur among very young children, from the greater liability to complications. According to Beddoes, the mortality from measles is, beyond all comparison, greatest in the second year of life.'[1] Vital Statistics of Michigan, 1885, says (p. 221) that 84.22 per cent. of the deaths from measles in that year occurred in children under five years of age, and that only 2.63 were above twenty years of age."

Quain's Dictionary states: "The annual mortality from measles in London is nearly five per ten thousand." In Michigan the *reported* deaths from measles for the twelve years, 1876–1887, average 146 per year. If we assume that only three fourths of the deaths were reported, the deaths in Michigan from measles have been about two hundred per year.

The report of the Iowa State Board of Health, in discussing this subject, says: "Measles is one of the most common diseases with which the human family is afflicted. So common is it, attacking young and old alike, if exposed, and if not protected by a previous attack, that people have come to regard it as one of the unavoidable dispensations of Providence. The idea obtains almost everywhere that there is no use to try to avoid it—that everybody must have the disease at some time, and it is better to have it in childhood than in adult life."

[1]Pepper, Vol. 1, p. 578.

There is a terrible mistake here. It is a wholly unnecessary disease. It exists only because of a settled belief in the opinions stated above in regard to the inability to avoid it.

It is a purely contagious disease. If there was not a single case in the United States for six months, there never would be another one unless brought in from abroad. *It is possible, by isolation and disinfection to stamp out the disease.* If, through the carelessness of others, it comes into any community, it can, by appropriate means, be restricted to the family where it first makes its appearance.

Measles is not regarded as a very serious affection, and yet, taking the whole state, the number who die or are disabled annually, is very great. Many who do not die, only partially recover. Permanent injury to the eyes or ears, or pulmonary diseases, often result therefrom. Those who have the disease in their family, and have them all recover without serious complications, congratulate themselves, not only on escaping so well, but because they had the disease and are done with it. The neighbor living near by, whose children contracted the disease from exposure to those who have recovered, may not fare so well. One or two may die or may be disabled for life. They will forever regret that the unnecessary importation of the disease was ever made into the community. It is as preventable a disease as small-pox, and there is no more excuse for its existence and spread than there is for small-pox. When a case occurs in any locality it is because some one has done a great wrong. If transplanted to any community, and it is allowed to become epidemic, a greater wrong is committed. It would save the state thousands of dollars annually, to say nothing of the loss of precious lives, and the entailment of useless grief, if the people generally would appreciate the fact that the disease is an imposition, and would act accordingly.

Statistics furnished by the Michigan State Board of

Health show that over seventy-one per cent. of all deaths from measles in the state were of children under five years of age, while but little over eight per cent. were of persons from ten to twenty years. The same percentage of deaths doubtless occurs in Iowa. It is therefore important to restrict the disease, and especially so that it shall not reach those in the second and third year of life.

The Iowa State Board of Health recognizes measles as a contagious and infectious disease. It should, therefore, be subjected to the same regulations, as to isolation and disinfection, as scarlet-fever and diphtheria.

Whenever a health officer of a local board has reason to believe that there is a case of measles within his jurisdiction, he should,—

1. Promptly investigate the subject.

2. Order prompt and thorough isolation of those sick or infected with measles.

3. See that no person suffers from lack of nurses or supplies.

4. Give public notice of infected places.

5. Notify superintendents or teachers of public schools, of families in which measles prevail.

6 Supervise funerals of persons dead from measles, and see that no public funeral is had.

7. Supervise the disinfection of rooms, clothing, and premises, and all articles likely to be infected, before allowing them to be used by other persons than those in isolation.

Every person recovering from measles, whether the form is mild or malignant, should be considered dangerous, and should not be permitted to mingle with others, nor attend school, church, or any public assembly, until, with the approval of the attending physician and the local board of health, he can do so without endangering others. Nor should any person from premises where there is or has been a case of measles, be permitted to attend public

school, church, Sunday school, or public assembly, until after a proper disinfection of the premises, and the clothing of such persons, if it has been exposed, has been had.

To avoid measles, keep away from it.

Do not let a child, especially between one and two years of age, go near a case of measles.

Do not permit a person, dog, or cat, or other animal, or a thing to come direct from a case of measles to a child.

Do not permit a child to wear or handle any article of clothing that has been worn by another during sickness or convalescence from measles.

Do not permit a child to ride in a hack or a closed carriage in which has been a person sick with measles, except the vehicle has been thoroughly fumigated with burning sulphur.

Unless your services are actually needed, keep away from measles.

Do not permit a child to kiss a person who has a cough or sore throat; nor take the breath of such person; nor drink from the same cup, blow the same whistle, chew the same gum, or put his pen or pencil in his mouth.

Beware of any person who has a cough or sore throat.

School teachers should be especially prohibited from going near measles, and this rule should be enforced by school boards and local boards of health.

Where there is complete isolation of the sick, and no communication whatever had with other persons, except the physician and nurse, other adult members of the family can safely go about their usual vocations, avoiding children and public gatherings. This exception will not apply to school teachers who may be living where there is measles. Such should leave the school, or change their residence.

Local boards of health are instructed to enforce the regulations upon the placard and are empowered to exact any additional precautions that the conditions and exigencies may seem to require.

This action with respect to measles is taken because the disease is the cause of many needless deaths. During the past seven years over two hundred deaths have occurred from it in New Hampshire.

It is true that, on account of the disease being communicable in its early stages, measles is not so readily restricted as some other diseases, but by prompt isolation in all cases many children might be saved that otherwise will certainly fall victims to this too generally ignored disease.

SCARLET-FEVER.

During the past few years scarlet-fever has been very materially reduced in this state, and that chiefly, if not solely, by the enforcement of sanitary rules and regulations. Efforts in this direction alone have saved to the state many valuable lives—enough, if nothing else had been accomplished, to more than justify the expenditure of every dollar that has been used in the public health service of the state. Scarlet-fever is one of the most communicable diseases with which health authorities have to deal; nevertheless it can be most effectually controlled and readily stamped out by prompt isolation and thorough disinfection. This fact we have endeavored constantly to impress upon the local boards of health and the public. Circulars relating to the prevention and restriction of this disease have been quite extensively distributed. Local boards are furnished with these circulars free of expense, and are urged to distribute them in localities where the disease is prevailing.

All that is necessary to protect a community when scarlet-fever appears, says the Iowa State Board of Health, is to isolate or separate the patient from all other persons except the physician and nurse, and destroy all the infection produced by the sick. In fact, public safety may be expressed in two words: isolation and disinfection. Hence it is good evidence if a second case appears, that isolation and disinfection have been neglected, and that the officers of a local board have not done their duty. Partial isolation and disinfection are of little value. The residence should be placed under strict regulations, be placarded to warn others against entrance; children of the family should be excluded from the schools,

and other children rigidly excluded from the sick children. The "walking case," one who may have had the disease in a mild form and goes about the community, is usually the source of an epidemic.

It may be assumed that to notify a family to disinfect premises after a case of scarlet-fever, is practically useless. It should be carefully done by an experienced person, or under the direct supervision of such a person. So many are the ways in which the virus of this disease may be retained and concealed, this point is of the utmost importance.

The following letter is illustrative of some of the points above mentioned:

South Newmarket, N. H., June 5, 1893.

State Board of Health, Concord, N. H.:

Gentlemen: Enclosed find our report for May. We are glad to report that the scarlet-fever did not spread from the house where we had the last cases, notwithstanding it was situated in a crowded district, with many young children in the immediate vicinity. As none of the family had been out of town we suspected that there *must* have been some connection between the first family and the last before the danger of infection had entirely passed, and we at first suspected a dog might have been the carrier. But diligent inquiry brought out the fact that a child from the first family taken, after the recovery of the survivors and the fumigation of their house and burning of clothing, came to the street where the last family resided, and associated and played with the child first taken down, and who was taken at just about the average period of incubation thereafter.

This warned us that there was danger of communicating the disease to a susceptible subject for a long time after recovery; so after the full recovery of the three later cases—all the children of the family—and the fumigation of the house, we forbade the children going to school, or to meet and play with others, or to go near them. Happily the parents and the children seconded all our efforts to prevent the spread of the disease; besides, the danger of infection and of the disease has been greatly impressed upon the minds of the community by the stringent means that have been

made to suppress it, as well as by the distribution of the pamphlets you so considerately sent us.

We need a provision in the law, allowing the family, while confined to the house, a certain sum per diem, say the amount paid jurors—$2 per day—for their support while the father, the wage-earner, is taken from his work. We are compelled by the statute to see that the family while isolated do not suffer for want of supplies. One of the families we isolated was poor, but proud; we were satisfied that they needed the help they *would not* ask for, but it required considerable tact to relieve them and not offend. A provision in the law such as we recommend above would relieve the board and the selectmen of much embarrassment, and would be an act of justice to the families isolated.

Respectfully yours,

GEO. E. FIFIELD,

Secretary of Board of Health.

If every local board of health were as prompt, interested, and efficient as the South Newmarket board was in the instance reported, this disease would soon be eliminated from the state. Unfortunately they are not, and for that reason scarlet-fever has been allowed to spread in some localities to an extent entirely uncalled for. It is not a difficult matter, ordinarily, to suppress this disease upon its first appearance in the community, and a board of health that fails to do so should be held responsible.

DISINFECTION.

There are two chief and all important factors in preventing the spread of certain communicable diseases—*isolation* and *disinfection*. The health officer is promptly notified upon the outbreak of the disease, the house immediately placarded, and the family isolated. Rules and regulations, sometimes inconvenient and even oppressive to the individual, are enforced, in order to protect the legitimate rights of others. The isolation is made effective and the disease soon runs its course. The fear of its spread is over; the surviving members of the family have fully recovered, and the restrictive measures imposed by the health officer seem no longer necessary. The first essential in preventing the spread of the disease has been faithfully performed; now comes the second, which is no less important, but which too frequently is a deceptive and useless farce. Disinfection, to be effectual, must be in accordance with what scientific investigations and carefully observed experiments have demonstrated to be necessary to the destruction of the germ or substance which produces the disease. Disinfection should always be performed by the health officer, or under his supervision. The State Board of Health furnishes every board of health in the state with explicit directions, as to how disinfection should be carried out. If fumigation is to be resorted to, a given amount of sulphur is required, according to the cubic space to be fumigated. A less amount leaves the result uncertain, or perhaps does not destroy a single germ of the disease. Likewise, all disinfecting solutions must possess a certain strength to be effectual. All of these points, and many more, should be understood by the health officer and conscientiously applied. Probably the lack of proper disin-

fection as much as anything else, explains the continued prevalence of contagious diseases. Not one man in a hundred can be depended on to properly disinfect a house and its contents. He seldom realizes the necessity for strict attention to the minutiæ of the work, and many articles escape disinfection.

The following case illustrates how diphtheria may spread: A gentleman living in Ohio lost a young child from diphtheria. The child's clothing and playthings were boxed up and placed in the garret. Sometime after this the man and wife moved to Kansas, where another child was born to them. More than two years afterwards the box containing the things belonging to his dead child was opened, and the playthings given to his second child and to other children in another family with whom he was living. Within ten days two of these children were dead with diphtheria. Disinfection of the child's playthings would have prevented these two deaths.

Dr. George M. Sternberg, Surgeon-General United States Army, in a recent official circular upon "Disinfectants and Their Proper Uses," says:

The definition of a disinfectant adopted by the Committee on Disinfectants of the American Public Health Association in 1885, has now been generally accepted by well-informed sanitarians. This is as follows:

"The object of disinfection is to prevent the extension of infectious diseases by destroying the specific infectious material which gives rise to them. This is accomplished by the use of disinfectants.

"There can be no partial disinfection of such material; either its infecting power is destroyed, or it is not. In the latter case there is a failure to disinfect. Nor can there be any disinfection in the absence of infectious material.

"Antiseptic agents also exercise a restraining influence upon the development of disease germs, and their use during epidemics is to be recommended when masses of organic

material in the vicinity of human habitations cannot be completely destroyed, or removed, or disinfected."

At the conclusion of the Lomb prize essay, published by the American Public Health Association in 1885, the following propositions are formulated:

"Disinfection consists in extinguishing the spark; killing the germ, which may light up an epidemic in the presence of a supply of combustible material—filth.

"The object of general sanitary police is to remove this combustible material out of the way, so that no harm may result, even if the spark be introduced.

"Antiseptic and deodorants are useful when it is impracticable to remove offensive organic material from the vicinity of human habitations, but they are a poor substitute for cleanliness."

Chloride of lime, carbolic acid, and mercuric chloride are issued by the Medical Department for use as disinfectants, properly so called. A solution of four per cent. of good chloride of lime, or five per cent. of carbolic acid, is suitable for disinfecting the excreta of patients with cholera or typhoid fever, or the sputa of patients suffering from diphtheria, scarlet-fever, or tuberculosis. The floors, furniture, etc., in rooms occupied by patients suffering from an infectious disease, may be washed with a two per cent. solution of carbolic acid, or with a solution of mercuric chloride of 1 : 1000. Soiled bed-linen, underclothing, etc., used by such patients, should be immersed in one of the above mentioned solutions before it is sent to the laundry. But, in the absence of any infectious disease, these disinfecting agents are not required, and their expenditure for purposes of general post sanitation is not authorized.

Sulphate of iron and other cheap antiseptics and deodorants may be used when necessary. But the necessity for their use is a reproach upon the sanitary police of a point, and should only be required under exceptional circumstances.

The alvine discharges of healthy persons do not require disinfection, and when properly disposed of do not require treatment with any chemical agent whatever. If water-closets or earth-closets are offensive, this is due to faulty construction, to insufficient supply of water or of dry earth, or to neglect of ordinary cleanliness. The attempt to remedy such defects by the systematic use of antiseptics is expensive and unsatisfactory in its results.

The same is true of foul drains, bad-smelling urinals, accumulations of garbage, etc. The proper remedy for such conditions is cleanliness and strict sanitary police.

When accumulations of organic material undergoing decomposition cannot be removed or buried, they may be treated with an antiseptic solution or with freshly burned quicklime. Quicklime is also a valuable disinfectant, and may be substituted for the more expensive chloride of lime for disinfection of typhoid and cholera excreta, etc. For this purpose, freshly prepared "milk of lime" should be used, containing about one part by weight of hydrate of lime to eight of water.

During the prevalence of an epidemic, or when there is reason to believe that infectious material has been introduced from any source, latrines and cesspools may be treated with milk of lime in the proportion of five parts to one hundred parts of the contents of the vault, and the daily addition of ten parts for one hundred parts of daily increment of feces.

While the feces of healthy individuals in privy vaults or on the surface of the soil are innocuous, it is well known that epidemics of cholera, typhoid-fever, and camp diarrhœa are usually due to the contamination of drinking-water or food by micro-organisms contained in the excreta of persons suffering from these diseases. This may occur as the result of direct contamination of the water-supply, and probably, also, by the transfer of infectious material to the surface of meats, milk, and other articles of food by flies

which have recently been in contact with infectious excreta. This source of infection has not heretofore received proper consideration, and the probability of its occurring when the feces of patients suffering from the diseases mentioned are deposited upon the surface of the ground, or in open privy vaults, calls for extreme care, especially during times of actual or threatened epidemic. In camp, where it is necessary to use open pits as latrines, dry earth, quicklime, or wood ashes should be frequently thrown upon the surface of fecal accumulations.

All known disease germs are destroyed by the temperature of boiling water, maintained for a few minutes. This being the case, the destruction of articles of clothing which can be subjected to the action of boiling water or of live steam without material injury, is unjustifiable. Exposure to steam under considerable pressure, or to superheated steam, which requires a specially constructed steam chamber, is an unnecessary exaction, free exposure to flowing steam for one hour being sufficient to secure disinfection. But this applies only to articles which can be freely exposed in a steam chamber, and not to mattresses, pillows, bundles of clothing, etc. As a rule, immersion in boiling water for half an hour will be the most convenient and most economical method for disinfecting articles of clothing, bed linen, blankets, etc.

When hair mattresses and pillows require disinfection, it will be necessary to open them up, either before or after immersing them in boiling water or in a disinfecting solutions, in order that the hair may subsequently be thoroughly dried. When this is done, the fact will be reported to the medical director of the department, and instructions will be given as to the disposition of the material.

When of little value, or in the absence of proper facilities for disinfection, mattresses, pillows, and clothing may be destroyed in compliance with A. R. 1625; but the de-

struction of articles which can be disinfected without material injury by immersion in boiling water or a disinfecting solution, is not authorized.

Dr. C. N. Hewitt, the secretary of the Minnesota State Board of Health, in a circular to the health officers of his own state, says:

"I wish to call attention to the means of disinfection at our disposal other than boiling. They are the use of *concentrated alkalies*, *caustic lime* in the form of fresh white-wash, or lime water prepared after the form here reprinted for convenience, and for washing clothing, floors, etc., *strong soft soap*, which is a potash soap and very fatal to microbic growths. These two agents are cheap, prepared by anyone, and available in country and town alike. The free use of the first upon all collections of excreta or other decaying matter, and of the last for cleansing purposes, make up a sufficient list of means for ordinary purposes, and if properly used, add largely to our safety.

"*Lime water* is the clear solution of *quick*lime. Take best quicklime in lumps, put in a pail, pour on one third as much water, cover closely, and slack till it is a fine powder or creamy fluid; one part of this to three of water will make a saturated solution. Add water in that proportion to the mixture, stir well, and then pour on half tea-cup of kerosene, which will protect it from the air and preserve its strength. Use the clear solution as needed, and the semi-solid matter can be made into white-wash or thrown into privy, cesspool, or garbage barrel. Always use '*soft* (potash) *soap*' for cleaning floors, furniture, and the like, after infectious diseases; it is a powerful disinfectant."

We wish to make the fact as emphatic as possible, that *disinfection to be effectual must be thorough*. Full and complete directions have been from time to time incorporated into the reports of this board, and many thousand copies in circular form distributed to the health officers and the public.

THE WEIRS SEWERAGE AND THE LACONIA WATER-SUPPLY.

Pending the action of the city of Laconia, upon the subject of providing an ample sewer system for The Weirs, the opinion of the secretary of this board was requested upon a few points, which opinion is given below as a matter of record, and also because of its general application in instances not especially different from this one.

THE STATE OF NEW HAMPSHIRE.

STATE BOARD OF HEALTH.

CONCORD, N. H., Aug. 25, 1893.

To the Committee on Sewers, Laconia, N. H.

GENTLEMEN: Having been requested by a representative of your committee to give an opinion upon the proposed plan of sewering The Weirs, I herewith comply.

It is perhaps needless to inform your committee that for the past eleven years I have been perfectly familiar with the sanitary conditions of that locality, and have often been called upon for advice relating to the water-supply, drainage, and sewerage of that place. A greater part of the present sewer was constructed by the old B., C. & M. R. R., under the approval of the State Board of Health, before any move was made by Laconia and Lakeport towards making the bay above the latter point a source of a public water-supply for these places.

Since the construction of the public water-works I have not recommended the further building of sewers upon the original plan.

The plans submitted by Colonel Waring, than whom there is no better sanitary engineer, to discharge the sewage of The Weirs into the lake, through submerged outlets, would be in fact an extension and perfection of the present system. We may safely

take his estimate, that during three weeks of the season the maximum amount of sewage that would be poured into the lake would be one hundred thousand gallons, almost twenty-four hundred barrels per day for a period of three weeks, while for seven weeks longer more than one half that amount would be discharged, and for the remainder of the year a much smaller quantity. The report contains the following:

"It is from four to four and a half miles from the outlet proposed to the in-take of the water-supply. After passing through the narrows, the river broadens out into the bay, and offers a large expanse for wave action and purification.

"Recent investigations tend to the opinion that disease germs in the presence of scavenger bacteria are of short life. In view of the above, the small amount of sewage, and the enormous volume of water, we are of the opinion that it is safe to discharge the sewage into the lake as planned."

If the report had said "probably safe," I could endorse it fully; but I am not prepared, in the light of modern sanitary science, to go so far as to say that it would be perfectly safe to the people of your city to pour the germs of typhoid fever into your water-supply at The Weirs. It is true that the probabilities in such a case are, that disease germs would be destroyed before reaching the in-take of your water system, but there is nothing to assure such a result. Therefore, your city would be liable to a most severe and alarming epidemic whenever the fecal discharges of a typhoid-fever patient entered the sewer at The Weirs. Just such instances are on record; therefore this is not assumption based upon theory alone. The Plymouth (Pa.) epidemic of 1885, in which more than eleven hundred people contracted typhoid fever, resulting in one hundred and fourteen deaths, was produced by the discharges of a single patient, whose case occurred on a stream supplying the reservoir several miles from town, and is a marked illustration of just what might happen to the people of your city. Other instances of epidemics from water pollution, as notable as this, might be cited.

With the sewage of The Weirs discharged into the lake, near its outlet, and the current slowly moving toward the point from which your water-supply is taken, there must be an ever-present danger, which I believe it is the duty of your city to provide against.

The few thousand dollars' extra expense that would be required

to construct and maintain a field disposal of sewage at The Weirs, should not for a moment be considered, when as between the plans may rest the safety of many lives. I cannot, therefore, endorse a plan which carries with it a menace to the public health.

Respectfully submitted :

IRVING A. WATSON,
Secretary.

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THE CATTLE COMMISSION: EFFORTS TO SUPPRESS TUBERCULOSIS.

The secretary of the State Board of Health and the secretary of the Board of Agriculture constitute a State Board of Cattle Commissioners. The work of this board for the year 1893 is embodied in the following report:

The statute under which action has been taken confers upon the board authority in all cases of contagious diseases among animals, and such attention has been given to all cases coming to the attention of the board as their importance seemed to demand. The legislature, in enacting the law, had in view the suppression of animal tuberculosis among the herds of the state; and to effect this, the efforts of the board have been mainly directed.

The law in force in 1892, providing for the appraisal of condemned animals in a diseased condition, of which amount the state paid four fifths and the town one fifth, was extremely difficult to operate, for the reason that the real value of an animal condemned with tuberculosis was not only difficult to determine, but also, if correctly fixed, would be so small a sum as to be hardly divisible in any proportion between the state and town. The legislature of 1893 enacted a law providing for the appraisal of such cattle upon a basis of health, of which amount the owner received one half from the state treasury. This law was not enacted upon the supposition that there was any such value to an animal condemned with tuberculosis, but rather with the object in view of inducing the owners of such animals to have them destroyed by the state authorities for the protection of the public, rather than

have them transferred to unsuspecting purchasers, and thus more widely spread the germs of disease and death.

This change in the law has had the desired effect; and in addition to this, the better knowledge prevailing among the people in regard to the disease has stimulated an increased interest in its suppression. The board has also availed itself of tuberculin in diagnosing obscure cases, the effect of which will be described more fully in this report. These things have enabled the board to locate and destroy many cases that would otherwise have escaped their notice, and thus remove a corresponding number of sources of infection.

The board has depended largely upon the advice of the selectmen in the various towns, and requests for investigations have been referred to them, when not accompanied by sufficient evidence to indicate the symptoms of tuberculosis. The preliminary examinations made by the selectmen have generally furnished the board with sufficient information to determine whether a thorough investigation should be made. Cases reported by individuals have been given immediate attention, when accompanied by specific information in regard to the character of the suspected case.

Under this arrangement many useless and unnecessary investigations have been avoided.

During the year 1893 the herds in two hundred and twenty-one stables have been inspected, from which one hundred and fifteen cattle have been condemned and destroyed, located in the following counties:

	Herds inspected.	Cattle destroyed.
Belknap	5	2
Carroll	1	1
Cheshire	6	5
Coös	2	2
Grafton	10	3
Hillsborough	127	71
Merrimack	43	17
Rockingham	21	12
Strafford	2	2
Sullivan	4	1

A post mortem examination has been made in every instance, and, without a single exception, it has verified the diagnosis and revealed the existence of tuberculosis. From January 1 to April 1, 1893, the appraisal was made, so far as it could be, in accordance with the law in force in 1893. From April 1, 1893, to January 1, 1894, the appraisal has been made in accordance with the law enacted by the last legislature. The state has paid for the one hundred and fifteen cattle killed $1,826.80, or an average of $15.88 each. Attention is called to the fact that seventy-one of the one hundred and fifteen cases found were located in Hillsborough county, and it is also of interest to know that twenty-four of those cases were found in one town. Merrimack county furnishes seventeen cases, of which eight were found in a single town. Isolated cases are found in various sections of the state, but are generally traceable to some locality, either within or outside the state, where the disease is known to exist. Reference to the counties and towns named is made with no intention of injury, but rather to

show that the disease appears to be more localized than is generally supposed, and, therefore, there is more encouragement in the work of suppression. In 1892 no less than twenty-one cases were found in the town of Antrim, and in 1893 the board has found but one case in that town. It is only by the most vigorous measures that the headway of this dangerous and insidious disease can be checked, and its complete eradication is impossible.

The subject is receiving increased attention throughout the country, and President Cleveland, in his recent message to congress, had the following to say in regard to it:

"While contagious pleuro-pneumonia in cattle has been eradicated, animal tuberculosis, a disease widespread and more dangerous to human life than pleuro-pneumonia, is still prevalent. Investigations have been made during the past year, as to the means of its communication and the method of its correct diagnosis. Much progress has been made in this direction by the studies of the division of animal pathology, but work ought to be extended, in coöperation with local authorities, until the danger to human life arising from this cause is reduced to a minimum."

Tuberculin is a recent aid to the diagnosis of tuberculosis. We have always lacked a sure method of diagnosing this disease in its earlier stages, which has practically made it impossible to carry out full measures for its suppression.

In December, 1890, Professor Koch announced his discovery of a substance which had a specific action on tubercular processes, which, when properly administered, caused a hyderæmia around the tubercle and an elevation of the body temperature. This action was not observed when the substance was injected into healthy subjects, or into subjects of disease other than tuberculosis. This substance is known as Koch's Lymph of Tuberculin, and it was hoped for a time that it would cure consumption, but this has been abandoned.

In 1891, Professor Gutman, of Dupat, Russia, employed tuberculin as a means of diagnosis of tuberculosis in cattle. He found a temperature reaction in those diseased, but none in healthy animals.

This substance has since been used in the diagnosis of this disease in every civilized country, and the reports are very favorable.

The imperial health office of Berlin has recently published an extensive report on its use in the diagnosis of tuberculosis in cattle, which says it has been found reliable in all sorts of cattle. Even when the lesion is hidden, and the animal appears healthy, tuberculin reveals the presence of this disease. The *Berlin Veterinary Weekly* contained an editorial in a recent number, in which this statement occurred: "The proof which has been presented to our readers is more than sufficient. The results are absolute and gratifying, and show that tuberculin is a reliable agent for determining the presence of this disease."

We have killed a number of cows which have reacted to tuberculin, and have found them tubercular in every instance, and when animals do not react after injection it can be said, with almost absolute certainty, that they are free from tuberculosis. Results with tuberculin have been so satisfactory that it is considered one of the most important advances in veterinary medicine in recent years. The method of using it is as follows:

A ten per cent. solution is made in a one per cent. solution of carbolic acid, and of this dilution 2.5 to 5 cc. are injected. This injection had best be made about 6 a. m., at which time the temperature is taken. After three hours the temperature is measured, in intervals of one or two hours, for fifteen hours, and if a variation beyond normal occurs, it is a reaction, and the animal is in all probability affected with tuberculosis. The amount of the reaction varies from two to six degrees, and lasts from twelve to twenty-four hours.

With this to aid us, we are now in a position to battle with the disease as never before, and can enforce the regulations on the statute books.

By authority of the board, nineteen horses, condemned with glanders, have been destroyed during the year. These have been generally isolated cases, but in one stable five of eight horses were killed. A valuable aid in detecting obscure cases of this disease is mallein, a substance acting upon horses in a similar way to tuberculin upon cattle. As far as the experience of this board is concerned, it has proven mallein a valuable and authentic test in all cases of suspected glanders, unless it shows the most positive symptoms without resorting to the use of this test, under the supervision of a competent veterinarian.

But litle hog cholera has been developed in the state during the year, and the board has been able to take hardly any action in regard to it. Advice has been given in all cases reported, and when there seemed imminent danger of a large outbreak the board took all possible means to prevent its spread.

The quarantine regulations established between New Hampshire and Massachusetts by this board are still in force, and have prevented the introduction into the state of any tuberculous animals.

One veterinary surgeon, who examined several herds for parties in Massachusetts, to be sent into our state for pasturage in the spring of 1892, rejected twenty-seven animals as suspicious cases in the few herds that he examined. The quarantine regulations will probably be continued until there is less danger from the introduction of tuberculous animals from outside the state than exists at present.

While the people of the state should not be unduly alarmed by this disease, the board is of the opinion that the most vigorous measures for the suppression are not to be neglected.

The danger from tuberculosis to the herds of the state is a matter of trifling importance as compared to the danger to human life, and it becomes not merely a matter of financial importance to stock-owners, but one of interest and vital consequence to all our citizens. Every possible means of precaution should be taken, that the danger may be reduced to the minimum.

KEROSENE OIL—WHAT TO BUY. LAMPS, AND HOW TO USE THEM. GASOLINE, AND ITS DANGERS.

We present herewith a circular issued by the State Board of Health of Iowa under the above caption, which is worthy of the careful study of every user of kerosene oil or gasoline:

Kerosene may be said to be the middle product of petroleum: the upper being several volatile hydro-carbons, known under the general term of naptha, a highly inflammable substance; and the lower, or paraffine, heavier and less combustible than kerosene. Naptha is a very dangerous explosive. An excess of naptha in kerosene renders the kerosene dangerous. An excess of paraffine makes the kerosene heavy and less combustible.

The statutes of Iowa demand that so much of the naptha shall be removed that oil when heated to a temperature of 105° Fahrenheit, will not throw off a vapor which will ignite when in contact with a flame or lighted match. That is what is termed the flashing-point. Extensive observation and experiment have demonstrated that this standard will give satisfactory results for illuminating purposes, and be safe for use in ordinary lamps. It would not, however, be safe for kindling fires in the kitchen stove. No oil having a flashing-point below 106° can be lawfully sold or used for illuminating purposes in this state.

The flashing-point should not be confounded with the burning-point, or fire-test, which signifies that degree of temperature or heat at which oil placed in an open vessel will ignite and burn without a wick. The fire-test is not

recognized by the Iowa statute, and has little or no value as determining the actual quality of the oil. Retail dealers should especially bear this in mind. Refiners and tank-line companies frequently brand oil "175° fire-test,"—"headlight 175°," or other trade-marks which have no relation whatever, under the law, to the actual quality of the oil. The brand of an Iowa inspector, indicating the flashing-point, is to be deemed the actual quality and standard of the oil. The average difference between the flashing- and burning-point of kerosene is ten to fifty degrees, the average being twenty to twenty-seven degrees, so that oil branded 175° fire-test should have a flashing-point of 126°. Hence no person should be misled or deceived by the dealer who says an oil is 150° or 175° fire-test. Look at the inspector's brand, get the degree of flashing-point there given, and add twenty-seven to it, and you will have very nearly the actual fire-test. The law interposes no inhibition against trade-marks, except that no trade-mark asserting a fraud can stand.

The flashing- and burning-point are independent of each other. The flashing-point depends upon the amount of naphtha or volatile substance present, while the burning-point depends upon the general character of the whole oil. The addition of only two per cent. of naptha would not affect the burning-point, while it would lower the flashing point ten degrees. Hence the burning-point is not deemed a reliable standard of safety.

The tendency of retail dealers is to purchase oil having a high flashing-point, presumably on the theory that if oil having a flashing-point of 106° is safe, that of 126° is so much safer. Theoretically that is true, but the higher the flashing-point, the heavier the oil. Heavy oil congeals more or less in cold weather, will not rise freely, hence there is imperfect combustion. There is a limit to capillary attraction. Oil having a flashing-point of 106° to 110° will give better illumination, burn freer, and with greater

satisfaction in ordinary lamps, than an oil with a flashing-point of 120° or 126°.

Heavy, or high-grade kerosene has more or less paraffine, which tends to harden and clog the wick and overheat the wick-tube.

The fire-test of oil is made in an open cup. The flash-test, under the Iowa law, is made in a closed cup. It is proper here to say, for the benefit of retail dealers, that experiments made, covering thousands of tests, have shown that the average difference between the burning- and flashing point of oil, when both tests are made in the same cup, is from twenty to twenty-seven degrees. The average difference between the flashing-point of oil tested in an open cup, and the same oil tested in the Iowa (closed) cup, is twenty-five to thirty degrees. The difference between the burning-point of oil tested in an open cup, and the flashing point of the same oil tested in the Iowa (closed) cup, is from fifty to fifty-five degrees. Hence, commercial Head-light carbon oil, that has a burning-point, or fire-test, of one hundred and seventy-five degrees, tested, as it always is by the refiner, in an open cup, should have a flashing-point of one hundred and twenty degrees (minimum) to one hundred and thirty degrees when tested in the Iowa cup (closed). The specific gravity should not be above 48° Fahrenheit or 60° Baumé. If deficient in these requirements, as shown by the inspector's brand, a carbon oil could not be deemed true commercial Head-light oil. Such oil will not give good satisfaction in ordinary flat-wick lamps, and should be used only with burners and wicks especially adapted for heavy oil.

LAMPS.

Lamps should be of metal. Glass lamps should not be used in families where there are children. The bowl should be large in diameter, and shallow, not exceeding three inches in depth, so as to bring the flame as near the

oil as possible, to secure an even combustion of all the contents. With deep lamps the wick will fail to raise the oil when half consumed: crusted tube and overheated burner and deficient illumination are the result.

The base should be large and heavy, to prevent overturning.

They should be cleaned and filled every day, and once each week entirely emptied of their contents, to remove the dregs and sediment.

When oil has been kept forty-eight hours in a half-filled lamp, a dangerous vapor forms. This will be released by the process of filling the lamp.

Never remove the top or re-fill a lamp when burning.

Before lighting turn the wick down even with the tube, and raise it gradually, as the burner becomes heated.

Never blow down a chimney to extinguish a lamp. Turn the wick down until the flame flickers, then give a quick puff of breath horizontally across the top of the chimney.

Do not fill a lamp to overflowing, as oil expands greatly as it becomes heated, and may rise up the wick tube and become ignited and dangerous.

During the day keep the lamp where the oil will not become warm. Never set it on a mantel over a fire-place, grate, or stove, where there is a fire.

Never leave a lamp burning with the wick turned down. Air currents are liable to cause the chimney to break; the wick tube will then become greatly heated, and the lamp filled with a dangerous vapor. A burning lamp with a broken chimney becomes liable to violent explosion in about fifteen minutes. A lamp should not be left burning at all in a vacant room or house.

BURNERS.

The burners should be adapted to the oil to be used, whether heavy or light. It should be well made, of brass,

not brass-washed tin, and as short as possible. It should be properly constructed for draft and ventilation for the escape of vapor from the vapor-chamber of the lamp. It should burn without heating the burner—the cooler the better. The hinge-Sun, Grand, and Banner, for flat wicks, give satisfactory results with light oil.

The Dual, Duplex, Oxford, and Moehring will burn successfully oil having a flashing point of 270° to 280°, yet the flame will not be so white as that from 106° or 110° oil with a good burner, or give so good satisfaction.

For heavy oil, a more liberal wick is required to raise the oil freely enough to supply the flame, hence two or more wicks are provided.

Foul and ill kept burners are a more frequent cause of poor light than the oil.

The so called Hitchcock lamp, designed to burn without a chimney, gives a steady, strong, clear, pleasing light full sixteen candle-power, and being of metal, is commended for safety, economy, and illumination.

Burners should be kept perfectly clean inside and outside, and free from pieces of burned matches, charred wick, crustation on the wick tube, and accumulation of charred wick on the perforated disk. The disk is for the purpose of supplying draft and the necessary amount of oxygen of the atmosphere to consume the carbon of the oil. When the disk is clogged, imperfect combustion and smoke are the result.

To clean the wick, turn it up even with the tube and rub the finger lightly across it to remove the charred surface; do not cut it with shears.

Keep the vent-tube along the wick-tube into the lamp open and clean, as it is the safety-valve of the lamp.

Gummed and clogged burners can be easily cleaned by boiling a few minutes in sal-soda or concentrated lye and water.

Center-draft burners are rapidly displacing those with a

flat wick. Properly constructed, they supply oxygen of the atmosphere in larger quantity; increase the illumination with less oil; do not heat the oil, thus obviating danger from explosion, and give a more uniform, steady, brilliant light.

The rules for the care of flat-wick burners apply to center-draft burners.

The following is the result of tests made of several leading burners:[1]

Kind of lamp.	Diameter of wick holder inside.	Temperature of oil after lighting.			Consumption of oil in 3 hours at 30 candle-power.	Candle-power (maximum).
		1 hour.	2 hours.	3 hours.		
B. & H. Impr'd.	1 3-8 inch	99½ F	104 F	104 F	10½ ounces	44.4
Belgian.....	1 1-16 "	103 F	105 F	104 F	8 "	43
Pittsburgh.....	1 3-8 "	102 F	118 F	118 F	9½ "	37.1
Rochester.....	1 7-16 "	102 F	106 F	118 F	8 "	37

The most important feature of a lamp is safety; second are brilliancy of illumination, economy, cleanliness, and durability. No lamp, can be deemed safe in which the oil is heated over one hundred and six degrees. The space above the oil in a lamp in which the oil is unduly heated, becomes filled with a highly explosive naphtha vapor. The higher the temperature of the oil, the more naphtha vapor is thrown off. Hence there is great danger from moving a lamp which has been burning one or two hours, as the agitation of the oil will tend to force the vapor upward to the flame, when an explosion is inevitable. A lamp in which the oil is heated above one hundred and six degrees should not be moved or carried about a house when burning. It is safer not to use such a lamp at all, and thus obviate the danger that may arise from carelessness or negligence.

[1] NOTE.—The oil used was marked "Eocene," with a flash-test of 108° F. weighing six pounds five ounces per gallon, and commended for special refinement. The temperature at beginning was 65°.

As will be seen by the foregoing table the B. & H. and Belgian lamps gave the best of the most important results, and they possess all that can be desired for durability, brilliancy of light, and easy cleaning.

CHIMNEYS.

The chimney is an important factor in a successful lamp. If too large at the top, the flame is unsteady; if too small, the burner and oil are overheated. It should fit close at the bottom so that no air can pass under it. The bulb should be large, and proportioned to the wick. There are more than fifty kinds of burners, and every one requires a chimney specially designed for it, to make the right draft. When broken they should be replaced with the same. Get the best flint or lead glass, bearing the maker's name, costing a little more, but the cheapest in the end. They are made of the purest and best material, and will not break from heat. There is no economy in buying the cheap, common glass chimneys to be found in stores generally. They are usually worthless. A puff of cold air upon them when heated will cause their breakage, and render the lamp dangerous.

WICKS.

Probably not one person in one hundred gives a lamp wick thought or attention. Yet it is one of the most important factors in the burning of kerosene, as it is also one of the most probable causes of complaint of the unsatisfactory burning of oil. The markets are filled with cheap wicks, worthless and valueless at any price. Select an "American," or "Fletcher" wick which will snugly fit the tube, yet move freely when saturated with oil. If it binds in the tube draw a few threads from it lengthwise. It should only reach the bottom of the lamp, and should be changed each month.

SAFETY BURNING FLUIDS AND LAMPS.

A large number of so called safety lamps, and processes for making safety burning fluids, have been patented to render it possible to burn the explosive naphthas without danger. A keg of gunpowder is safer in a house than either. Agents go about, selling receipts for making the so called safety fluid, and claim that it is perfectly safe. It should be known that nothing can be added to naphtha that will change its explosive character. No lamp is safe with dangerous oil.

The chief substance of this so called safety fluid is gasolene, benzene, rhigolene, or other volatile constituents of naphtha—it is only naphtha under a false name, into which roots, barks, and salts have been introduced, only to leave it as explosive as before. The experiments given by the venders of these fluids to deceive the people, are very convincing. To show his mixture is not explosive, he will unscrew the wick-tube, apply a match where the vapor, if any, quietly takes fire and burns without explosion; or he pours a quantity in a saucer and applies a match. There is no explosion, the customer is satisfied, and to save a few cents per gallon, purchases the patent. Now, it should be borne in mind that a certain portion of air is necessary to cause an explosion of naphtha vapor. It requires some skill to properly mix these, and the vender is very careful that he does not do it. Equal parts of air and vapor will not explode; three parts air and one part vapor will give a vigorous flash; five parts air and one of vapor will give a loud report; eight or more parts air and one of vapor will give a violent explosion.

The sale or use of these so called safety fluids, or of any oil for illuminating purposes, the product of petroleum, which has not been inspected in this state, and approved, is prohibited in this state, and all agents selling such should be arrested, and fined or imprisoned as provided by law.

GASOLENE AND ITS DANGERS.

It is true gasolene may be used with a minimum risk of danger, but there always exists the liability to negligence, carelessness, a leaking can, and a defect in the stove; the stop-cocks may become worn and leak, permitting a flow of gasolene faster than it is consumed; the generating burner may be extinguished by wind, when the gasolene will continue to flow, and explode on relighting the burner. The stove has not yet been made that renders it "perfectly safe" to use gasolene. The danger lies in the gasolene itself, which is not safe to have about a house.

Certain precautionary measures may be adopted to render it less dangerous, if rigidly observed, to wit:

First. Keep it in a well ventilated, cool place, inaccessible to children; never in any part of a dwelling.

Second. No unclosed vessel, as a pitcher, basin, or cup, containing gasolene should be carried or placed within ten feet of a burning stove, lamp, gas, or flame of any kind.

Third. Gasolene should never be poured from one vessel to another in any room in which there is an open grate burning, nor within ten feet of a stove in which is a fire, lighted lamp, or a burning gas jet, as the current of air in a room is always toward a fire or burning lamp, and the vapor of gasolene will be carried in that direction and will ignite at a long distance.

Fourth. Never fill the reservoir of a stove when the burner is lighted, nor near another stove in which a fire is burning. To do so, an explosion is inevitable. When not in use, close the cut-off between the reservoir and burner. This will prevent overflow from defect or leakage at the burner. If there be an overflow of gasolene when filling the reservoir, or from the burner, wipe it carefully up before lighting the burner. If the overflow should become ignited smother it with a blanket or cloths. Do not throw water on it, as that spreads the gasolene and increases the

danger. This is true of the accidental ignition of any quantity of gasolene or kerosene. Keep the reservoir continually closed air-tight.

Fifth. If from leakage of a stove or vessel, there is discovered an odor of gasolene in a room that has been closed, throw open the doors and windows until the air is changed, before a match is struck or a flame of any kind is permitted therein.

Sixth. It seems absurd to give warning against kindling a fire with gasolene, but the record of self-murder from this cause is evidence that this superlative folly is perpetuated to an alarming extent. A more certain and horrible method of self destruction cannot be easily conceived.

Seventh. Keep gasolene in a tight vessel, and after drawing therefrom place the cap over the spout and close the neck and vent-tube if there be one. This will prevent the evaporation of the fluid. It is from evaporation, filling the air with an explosive vapor, comes the danger. To test this, pour a tablespoonful of gasolene on a plate, wait a minute and see how near a lighted match can be brought to it, being careful to have your hand below the bottom of the plate.

Eighth. Never attempt to clean gloves on the hand nor dresses with gasolene, near a flame or stove. The fire in the stove will draw the vapor from the gasolene through the crevices, and ignite it like a lightning flash. The deodorizing of gasolene for toilet use does not change its explosive nature.

HEALTH ORDINANCES

OF THE

NEW CITIES OF ROCHESTER, SOMERSWORTH, AND LACONIA.

ROCHESTER.

The board of health is composed of the city physician, the overseer of the poor, and a sanitary officer, who are paid for their services the sums of one hundred dollars, two hundred dollars, and three hundred dollars, respectively.

The following are the ordinances of the city relating to public health:

SECTION 1. The city council shall, at the beginning of the first municipal year, elect one person to serve both as city physician and member of the board of health for the term of one year, and at the expiration of said one year, and of every third year thereafter, shall elect one person to serve in both said capacities for the term of three years.

SEC. 2. It shall be the duty of said physician to attend, under the direction of the overseer of the poor, upon all sick paupers or patients under the care of the city authorities; to examine all persons applying for aid, and make a written report to the overseer of the poor as to their mental and physical condition; to vaccinate with cow-pox virus any scholar proposing to enter the public schools who has not been vaccinated, and who, through lack of means, is unable to pay therefor; and, in case of any alarm of any infectious or contagious disease, to give to the city council, or any committee thereof, all such professional

advice and counsel as they may request of him, and generally to perform such other professional services as may reasonably be required of him by the mayor and council.

SEC. 3. Said physician shall have no power to bind the city to pay for the assistance or service of any other physician, or any bill whatever, except when authorized in writing so to do by the mayor.

SEC. 4. The city council shall, at the beginning of the first municipal year, elect a person to serve both as overseer of the poor and member of the board of health for the term of two years, and at the expiration of said two years, and of every three years thereafter, they shall elect a person to serve in both said capacities for the term of three years; and at the beginning of the first municipal year, and every third year thereafter, they shall elect a person to serve as a member of the board of health for the term of three years, who shall be the executive officer of said board, and be denominated the sanitary officer.

SEC. 5. Said sanitary officer, city physician, and overseer of the poor shall constitute the board of health provided for in the city charter, and shall have all the powers given such officers by the laws of the state and the ordinances of the city.

SEC. 6. The sanitary officer shall thoroughly acquaint himself with the sanitary laws and regulations prescribed by the state and city ordinances.

SEC. 7. The sanitary officer shall devote at least one half of his entire time to the performance of the duties imposed upon him by virtue of his office. He shall investigate all complaints relating to nuisances that may be brought to his attention, serve all orders and notices issued by the board, and enforce all rules and regulations, or other conditions affecting the health or comfort of the public. He shall have the same power to make arrests as is by law and ordinance conferred upon the regular police of the city, in

all cases where any person or persons shall violate the laws of the state, city ordinances, orders, rules or regulations relating to the health of the city, and shall wear a badge prescribed by the board. In case he shall be unable to act as the executive officer of the board, through sickness or other good cause, the board may elect a suitable person to act temporarily in his stead, and such person, while so acting, shall possess all the authority and receive the same compensation which the sanitary officer would otherwise receive under the provisions of these ordinances.

SEC. 8. The sanitary officer shall, under the direction of the board of health, in the first week in May, commence a systematic house to house sanitary inspection, which shall continue until the inspection of the city is completed. He shall secure the abatement, within a reasonable time, of all nuisances found, and shall give such advice and make such recommendations to householders and others as he may deem necessary to secure good sanitary conditions.

SEC. 9. It shall be the duty of every physician, surgeon, or other person attending upon a case of small-pox, epidemic cholera, epidemic dysentery, diphtheria, scarlet-fever, typhoid fever, measles, yellow-fever, or other dangerous, contagious, infectious, or pestilential disease, and every householder, attendant, or agent in whose house a case of any such disease occurs, immediately to report every such case to the sanitary officer or to the board of health, giving the number of the house, the street, avenue, or lane upon which it is situated, and the name of the occupant or occupants, with the name and age of the diseased person, if known; and the board may take such action as they deem expedient to prevent the spread of such disease.

SEC. 10. All petitions for the cleansing, removing, or abatement of any nuisance, shall be made to the board of health, or to the sanitary officer, or to any one of them, verbally or in writing, stating distinctly the character of

such nuisance, the premises where situated, and the reason for its removal or abatement; but if it becomes necessary to institute legal proceedings against the party or parties complained of, the complainants shall, before such proceedings are instituted, file a complaint in writing with the board.

SEC. 11. A notice served on an owner, agent, or occupant of any property, or left at the private residence of the owner or agent, or occupant, or, if neither can be found, posted on the front door, or wall, or fence of such property, and a like notice sent to his last known post-office address, shall be considered sufficient and ample notice.

SEC. 12. The board of health shall meet at such times and places as it may deem necessary, for the consideration of matters relating to the public health; and shall investigate, inquire into, and advise in all cases referred to them for such.

SEC. 13. They shall make such rules and regulations for the prevention and removal of nuisances, for the control and restriction of infectious and contagious diseases, and such other regulations relating to the public health, as, in their judgment, the health and safety of the people may require; which shall take effect when approved by the city council, recorded by the city clerk, and copies thereof printed and circulated among the citizens, or published in one or more of the papers of the city.

SEC. 14. They shall prescribe a blank form, upon which the sanitary officer shall enter a complete record of all his inspections, of all complaints made to him or the board, of all orders issued, of all notices served, and of all nuisances abated. Such records shall be submitted to the board of health whenever called for, and at the end of each fiscal year shall be placed in the hands of the city clerk.

SEC. 15. The board of health shall provide itself with such blanks and record books, at the expense of the city, as

are necessary, and shall promptly, at the close of each financial year, make a report in writing to the city council of all complaints made to them, and the cause of the same, of so much of the vital statistics as is necessary, of the cause of death so far as possible, and of such other sanitary information as may be called for by the city council, together with such suggestions pertaining to the public health as the board shall deem expedient to present.

SEC. 16. No person or persons shall suffer or permit any cellar, vault, private drain, pool, sink, privy, sewer, or other place upon any premises or grounds belonging to or occupied by him or them to become offensive or injurious to the public health.

SEC. 17. No occupant, or person having control or charge of any lot, tenement, building, premises, or other place, shall cause or permit any nuisance to be or remain in or upon the same, or between them and the centre of the adjoining street, lane, or alley.

SEC. 18. No pen or sty for swine, swill-house or building for rendering any offal, tainted or damaged lard, tallow or any putrid substances, shall be erected within the compact part of the city, if the same in the opinion of the board of health is a nuisance; and no swill, garbage, or any animal or vegetable substances shall be allowed to accumulate in or about any premises until the same becomes putrid or offensive.

SEC. 19. No hog-pen, goat-pen, chicken-coop, or barnyard shall be kept or used so near to any street, lane, or adjoining lot on which others reside, as, in the opinion of the board, to be injurious to the public health or offensive and injurious to the health of such adjoining residents, by reason of such proximity, or by reason of their being kept or maintained in such a position that the contents therefrom shall be discharged upon said adjoining lot, street, or lane; and no manure from stables or other places shall be allowed to accumulate until it becomes offensive to persons

residing in the vicinity or passing along any street, lane, or highway.

SEC. 20. All vaults, privies, and cesspools shall be so constructed that the inside of the same shall be at least two feet distant from any street, lane, alley, court, square, public place, public or private passage-way, and from the line of every adjoining lot, unless the owner thereof shall otherwise agree or consent. No person shall open a vault, privy, or cesspool, or remove or haul the contents thereof through any street of the city, from the first day of May to the first day of November of each year, between the hours of six o'clock in the morning and ten o'clock in the evening.

SEC. 21. When any vault, privy, cesspool, or drain shall become offensive or obstructed, the same shall be cleansed and made free; and the owner, agent, occupant, or other person having charge of the premises in which any vault, privy, cesspool, or drain may be situated, the state or condition of which shall be a violation of the provisions of this chapter, shall remove, cleanse, alter, amend, or repair the same within such reasonable time, after notice in writing to that effect shall be given to either of them by the sanitary officer, as shall be expressed in such notice. In case of neglect or refusal to do so, the board of health may cause the same to be removed, altered, amended, or repaired as they may deem expedient, at the expense of the owner, agent, occupant, or other person aforesaid.

SEC. 22. Any person or persons, company or corporation, who shall violate, or cause to be violated, by agent or otherwise, any of the provisions of this chapter, or any of the orders, rules, or regulations of the board of health, or who shall fail to comply with any of the requirements thereof, by agent or otherwise, upon conviction before the police or other court of competent jurisdiction, shall be fined not less than three nor more than twenty dollars, with costs of prosecution, except in cases where the punishment is prescribed by the laws of the state.

SOMERSWORTH.

The board of health of this city consists of the city physician, overseer of the poor, and a sanitary officer, who are paid one hundred dollars, fifty dollars, and one hundred and eighty dollars, respectively.

The public health ordinances of this city are almost word for word like those of Rochester.

LACONIA.

The board of health of this city is elected under the following provision of the city charter:

SECTION 18. The city council first elected under this act, shall, at their first meeting, elect three persons, legal voters of said city, to constitute a board of health, to serve until their successors are chosen in March, 1894, and qualified; and in the month of March, 1894, they shall elect one for one year, one for two years, and one for three years; and thereafter they shall annually, and in the month of March, and on or after the fourth Tuesday therein, elect one such person to serve on said board for the term of three years. Elections shall be so made that at least one member of said board shall be a physician. Said board shall receive such a compensation for services as the city council shall prescribe.

The following ordinances, adopted by this city, relate to the functions of the board of health and the city physician:

CHAPTER IX.

BOARD OF HEALTH.

SECTION 1. The board of health first elected under the provisions of the city charter shall organize by the choice of one of their members as chairman, and another as clerk, and all succeeding boards of health of the city, elected as

provided by the terms of the charter, shall immediately after their election and qualification organize in the same manner.

SEC. 2. The board of health may adopt such rules and regulations for their own and the government of all subordinate officers by them employed as they may deem expedient, not repugnant to the laws of the state. They shall receive such compensation for their services as the city council shall prescribe.

SEC. 3. The board of health shall have and exercise all the powers vested in, and shall perform all the duties prescribed for, health officers of towns under the Statutes. It shall be the duty of the board to enforce the laws of the state, and the regulations of the board, relative to health, and to make a report in writing of all acts done by them or under their authority to the city council once each month.

CHAPTER X.

CITY PHYSICIAN.

SECTION 1. The city council first elected under the act of incorporation of the city shall, as soon as convenient after its organization, by ballot, elect a city physician, to hold office until his successor is chosen in the month of March, 1894, unless removed by the city council for sufficient cause. And in the month of March, 1894, and after the second Tuesday therein, and thereafter annually in the month of March, and after the second Tuesday therein, the city council shall elect by ballot a city physician, to hold office for the term of one year and until his successor is chosen and qualified. The city physician shall be a resident of the city and a physician of good professional standing. He shall receive such salary or compensation for his services as the city council shall fix and determine, and his term of office shall begin at such time as the city council shall by ordinance determine.

SEC. 2. It shall be the duty of the city physician to attend, under the direction of the board of overseers of the poor, upon all sick paupers and patients under the care of the city authorities, at the poor farm or elsewhere, except in cases provided for by the county; in case of an alarm of any infectious or contagious disease to give to the city council, or any committee thereof, all such professional advice and counsel as they may request of him, and generally to perform such other professional services as may reasonably be required of him by the mayor, city council, or overseers of the poor. He shall examine all persons injured by alleged defects in highways, or by other alleged negligence of the city, relative to the extent of the injuries received, and upon completion of such examination shall make a written report to the city council of the condition and effect of such injuries.

THE ADULTERATION OF COFFEE.

The adulteration of coffee is practised to such a large extent that the subject is receiving considerable attention in some states. Dr. Willis G. Tucker, director of the state laboratory of New York, renders a valuable report to the state board of health of that state upon the examination of coffee, tea, and cocoa. We present herewith a greater part of his report upon coffee. He examined six hundred and forty-two samples of these articles, collected from the retail grocery stores, and found much of the ground coffee and package coffee on sale to be adulterated, The means of the adulteration, and the notorious efforts in that direction, are well shown. The report says:

Coffee of commerce is the berry or seed of Coffee Arabica. The trees, growing wild, sometimes attain a height of fourteen to eighteen feet, but under cultivation rarely exceed six to nine feet. According to Thorpe three distinct species of coffee tree are now grown.

1. Arabian or Mocha coffee, having short, upright branches, with a brittle leaf, and seeds usually single in the berries.

2. Jamaica coffee, bearing longer and more pliable branches; a tough leaf, and seeds almost always double.

3. East Indian or Bengal coffee, of which the leaf is smaller than the Jamaica variety, and the berry very small.

The tree is now largely cultivated in the West Indies, Mexico, Central America, Brazil, in Western Africa, in Arabia, Ceylon, India, Sumatra, Java, and various islands of the Pacific.

Half of the present world's supply is said to come from Brazil.

According to estimates, taken from the *American Grocer* of January 4, 1893, and based upon reports of the secretary of the United States treasury department, the total consumption of coffee in the United States for the trade and fiscal year ending January 30, 1891, was 511,041,459 pounds. For the year ending June 30, 1892, 623,769,046 pounds.

The average price of the coffee imported, based upon the declared value at the point of export, has increased rapidly in the last few years. In 1889 it was thirteen cents; in 1890, sixteen cents; in 1891, ninteen cents; and in 1892, twenty cents. This record indicates a high purchasing power on the part of the people.

These high prices and the large consumption have apparently encouraged the manufacture and sale of a large amount of coffee compounds, coffee substitutes, cereal coffees, imitation coffee beans, and other products.

In the examination of coffees, as sold in the state, a large number of these adulterations have been detected, and are described more in detail in what follows. Nearly all of these compounds, substitutes, etc., should be considered frauds, especially those which are called or sold as coffee, and which usually contain very little or no real coffee.

None of the substances that are used as coffee adulterants are poisonous, and probably none of them are injurious to the health.

The following extracts, taken from the Philadelphia *Times*, and published in Bulletin No. 32, Division of Chemistry of the United States Department of Agriculture, will describe the adulteration of coffee with an imitation bean, which contains usually no coffee:

Counterfeit coffee is the latest addition to adulterants. It is a manufactured bean, identical in appearance with

genuine green or roasted coffee, and dealers in this city (Philadelphia) have recently been flooded with it. It is almost impossible to detect the fraud with the eye. It is apparently a hard-baked composition, moulded by machinery in the same manner as druggists' pills.

It is very hard and gritty, and not as easily broken as the genuine. Having little or no taste or odor, its sole mission is to increase the bulk and weight of the regulation article, and this it does admirably, its weight being more than double that of the legitimate bean.

This is the bogus coffee bean, and now most widely used. It is of German manufacture, and is supplied by a Brooklyn agent. Other varieties, similar in appearance and differing but slightly in composition and taste, are manufactured in this city and in New Jersey.

Quantities of the imported coffee substitute have been sent to Philadelphia dealers since the first of the year by the Brooklyn agent, whose name is M. Kliemand, and whose office is at 327 Degraw street.

Mr. Kliemand, or a representative, made several trips to this city, and received orders for considerable amounts of his stuff. To those who didn't order it he sent generous samples, and few local dealers have not met with it. Its sales are reported by the agents of local wholesale coffee dealers and roasters as enormous. As it is supplied at only eleven cents a pound, it leaves a big margin of profit to dealers who mix it with the genuine.

Dealers who have not consented to use the counterfeit have been at a loss as to what defense to make against its encroachment on their trade, since it is not sold to wholesalers as coffee, but as "coffee substitute," dealers being left to their own discretion in the matter of mixing and reselling as the genuine article. One dealer, who feared that it would be a hopeless task to invoke the aid of the law, decided to draw public attention to the swindle by giving an exhibition of the samples.

The following notice was posted in the window of Harkness & Dering, at 244 Chestnut street:

"Beware of counterfeit coffee. A manufactured bean, made to resemble genuine roasted coffee, and generally sold to consumers mixed with the genuine."

The window was filled with samples of the "coffee substitute," which another sign announced were not for sale, but to be given away. Naturally enough, there has not been much request for them, even on this basis, and the dealer has noticed that two or three persons who had the hardihood to take a little home to try have not returned for a further supply. Just what is claimed for the counterfeit coffee is shown by the following letter, received by the firm:

M. Kliemand, Commissioners, and
Representatives, 327 Degraw St.,
Brooklyn, N. Y., January 14, 1890.

Messrs. Harkness & Dering:

Gentlemen: I beg to mail to you a sample of a coffee substitute, called "Kunst Koffee," manufactured by Messrs. Erhorn & Dierchs, Hamburg, who appointed me general agent for the United States.

Advantages: It is animating but not exciting, and very nutritious and wholesome, softening the taste of the inferior coffees; quality unimpaired for twelve months and longer.

Roast: Light, middle, and dark.

Price: Eleven cents per pound, New York net, per Pennsylvania railroad.

Packing: In bags of seventy-five ks. (161 pounds).

I enclose the official analysis from Dr. Ules, sworn trade chemist, and hope to receive your kind order.

Yours very truly,
M. KLIEMAND.

The enclosed analysis, to which Kliemand referred, gave a list of harmless ingredients, including water, carbon, etc.

Mr. Harkness said: "The sale of the counterfeit beans

in this city is tremendous. I should not be surprised to see a lot of manufactories starting up in this city, for there is so big a demand for the stuff that there is a quick fortune in making and selling it. I have heard that similar counterfeits are made in Trenton and other places in New Jersey, although there were some prosecutions there some time ago. Some parties must have been making the stuff in this city, too, as there are different varieties on the market.

The counterfeit beans mix easily with the genuine, and the price, eleven cents a pound, leaves a big profit when the higher classes of coffee are so adulterated. Just what proportions are generally used in mixing I don't know—one half would probably be too much. The bogus bean outweighs the genuine more than two to one.

The worst counterfeit of the lot is a bean made to resemble the green coffee. It is apparently a hard moulded paste of starch or flour, in which some coloring material has been used.

Coffee Dealer Harkness, who has also seen specimens of the green counterfeit, said that he had heard that one of the ingredients was Paris green, and that a family had been made very sick from its use. Where it was made was a mystery, but he was inclined to believe it was procured not far from home, although it might be imported, like the burnt samples.— Philadelphia *Times*, April 30, 1891.

And the following, from a later number of the same paper, is also quoted in the bulletin referred to:

The imitation coffee bean now found in the market is harmless enough, being made for the most part of flour and water. The beans are manufactured by machinery which has a capacity for turning out immense quantities in a very short time.

Most of the counterfeit coffee of local manufacture now on the market is said by dealers to have been made by the Dowling Manufacturing Company, which has an office on

Fifteenth street. This firm manufactured coffee beans of flour and water, green and roasted, and sold them in packages labeled "Java coffee" in large letters, with the addition, in very small type, of the word "compound." The firm ceased doing business a short time ago. Immense quantities of the "Java coffee compound" were distributed throughout the city and New Jersey, and are still to be found in the market. The selling price was seven or eight cents a pound. An attempt was made to form a stock company, and it was claimed that about $150,000 of capital had been secured.

North Dowling, the head of the company, is now associated with J. E. Burns & Co., spice dealers, on Front street, in the manufacture of "process coffee." This is also an imitation of the genuine coffee bean or berry, but it is not sold as the pure article, and the business is legitimately conducted and a patent applied for.

The process coffee is composed of thirty-three per cent. of pure coffee mixed with rye, and bears the indorsement of Dr. Genth, of this city. The mixture is turned into the bean shape by machinery made and patented for the work.

Mr. Burns said yesterday that he shipped the process coffee principally to the West and Southwest. He sold great quantities of it, and considered it superior to the poorer grades of coffee, sold generally as "siftings." The Dowling Manufacturing Company gave up its business because it did not pay to make an imitation absolutely free from coffee. There was, too, considerable trouble over the sale of the counterfeit in New Jersey, where the law against adulteration is very strict.

Jobbers are anxious to check the sale of the counterfeit, because they are so widely used by dealers to mix with the genuine that less of the real article is sold than would otherwise be the case; but the manufacturers, as they do not label their production as pure coffee, cannot be proceeded against.

The sale of the imitation bean had extended in other directions, as the following extracts from the Toledo *Blade*, also published in Bulletin No. 32, of the United States Department of Agriculture, will show:

"Lactoserin." What is it? It is an imitation of coffee—an excellent imitation, too—and it comes from Sweden. It looks like coffee, and it smells like coffee, but it is not coffee, and consumers will in the future do well to look to what they are buying, as otherwise they may be made the victims of a remunerative Swedish joke—remunerative to the gentlemanly perpetrator.

The difference between genuine coffee and its Swedish imitation is very pronounced when the test is applied—the test of taste. The imitation looks like the genuine article, but does not taste like it. As soon as it is crushed by the teeth, it resolves itself into small particles in the mouth.

A coffee dealer on being interviewed, said the imitation is, of course, a fraud, *i.e.*, so far as it's being equal to genuine coffee is concerned, and it may for a little time interfere in some degree with the legitimate coffee trade. One of our men last week visited a regular customer, and asked, as usual, for an order. The dealer told him he had bought coffee cheaper elsewhere, and had made more money on it than he could on ours.

The Dowling Manufacturing Company, of Philadelphia, have a corner on the new merchandise, and are flooding the country with sample packages.

The imitation will be manufactured at ten cents per pound. A half pound of coffee at twenty-five cents, and half of "lactoserin," at ten, would make a pound of mixture worth seventeen and a half cents. It would sell readily at twenty-five cents, as the people know nothing of the new article, and have been paying twenty-seven cents a pound, and the profit to the seller would be nine and a half cents. This is quite an item when it is taken into consideration that there is very little, if anything,

made on coffee by the retail dealer. The genuine article costs him twenty-five and seven-eighths, and he grinds and sells it for twenty-seven. The temptation to make something, will probably prove so strong that a good deal of "lactoserin" will be sold. In ground coffee it cannot easily be detected, as it has the color and odor of the genuine.

The following concerning this same subject is taken from the report of the Dairy Commissioner of the State of New Jersey, for the year 1891:

There are two kinds of bogus coffee—an imitation bean and the ground article. The bean is the most difficult to produce, and it is only recently that actual success in the direction has been attained. The bogus bean must not only look like the genuine berry when raw, but it should be capable of taking a proper color when roasted. A very good specimen is now manufactured in Philadelphia and Camden, being composed of rye flour, glucose, and water. The soft paste is then moulded and carefully dried. To the eye of an expert the presence of this imitation is easy of detection, and it cannot be used to any great extent among wholesalers.

But when coffee goes to the retailer, adulteration begins. Sometimes the retailer is deceived, but nine times out of ten he is the one who introduces adulteration. The ground article is very easily produced in the proper color, and an aroma is infused by using strong decoctions of coffee essence. When mixed with real coffee even the expert eye and tongue may be deceived, while to the ordinary consumer it seems to be the genuine product. Bogus coffee beans have only a slight resemblance to the natural berry, for though they possess the proper form, the cicatrice on the inner surface is too smooth.

Then, again, the gray color of the raw bean is not quite up to the mark, but when these manufactured beans are roasted with five per cent. of genuine coffee, they find a ready sale. These bogus beans can be made at a cost of

thirty dollars per 1,000 pounds, and when mixed with fifty pounds of pure coffee, the whole 1,050 pounds cost thirty-seven dollars and fifty cents, or three and three-fourth cents per pound, so that a profit of nearly 100 per cent. is the result.

By prompt action on the part of the commission, as soon as the imitation bean was discovered, it is claimed that the sale of the bean was entirely stopped, and that it has not again been put on sale in New Jersey.

That the manufacturer of the imitation bean is not dead, the following advertisement, taken from one of the prominent trade papers, as late as August, 1892, will show:

Coffee compound: Manufactured in the whole bean, of healthful and nutritious ingredients, and far superior to low grades of coffee. Put up in one pound packages, with the indorsement of Dr. Alex. Muckle, an eminent chemist of Philadelphia. Send for samples and prices.

DOWLING MANUFACTURING CO.

A sample package, with prices, was sent for. Printed on the package was the chemist's certificate, as follows:

Having free access at all times to your factory, I am perfectly familiar with the manner of preparing Java Coffee Compound, and ts composition. I therefore certify that the Java Coffee Compound is made on scientific principles, and consists of the best Java coffee, combined with certain other pure articles, which are healthy and nutritious. As represented, it is made to assume the shape of the coffee bean, expressly to indicate the specialty of its manufacturer, and also to produce it in its most presentable form.

ALEX. MUCKLE, M. D., *Chemist.*

On another part of the package were printed these claims:

What is claimed for the Java Coffee Compound.

With a thorough knowledge of coffee, from its plantation to the delicate cup of French coffee, we maintain, viz.:

1. The Java Coffee Compound, unlike coffee, loses none of its aroma in roasting, the volatile oils affording the aroma being retained.

2. It is exhilarating in its effects, and yet suited for the most nervous temperaments.

3. It is nutritious, and on that account is well adapted for invalids, or those suffering with a weak digestion.

4. It can be ground finer than any other coffee, and its infusion made in much less time than that of the latter.

5. It can be transported to any climate without impairing its fine qualities.

This truly remarkable compound is furnished at the very low price of ten cents per pound, as the accompanying letter received from the makers will show:

DEAR SIR: Replying to your favor of the fifth, beg to state that we send you, by express, this day, sample package of our "coffee compound," which we put up in one pound packages, 100 to the case. Or in bulk, fifty and one hundred pound bags, and barrels of about 185 pounds, at ten cents per pound, net, no discount, ten days.

We roast in three shades,—light, medium, and dark.

Respectfully,

THE DOWLING MFG. CO.

Quite recently this company has sent out to dealers the following letter:

To the Wholesale Trade:

DEAR SIR: Herewith we present for your inspection a sample of coffee compound. It contains nothing but the best of pure and healthful ingredients, and is made only in the bean shape.

By blending with the natural coffee bean you can improve it, and bring it within the reach of those unable to purchase at the present high price of coffee.

We sell only to the trade, at eight cents per pound, in barrels of about 185 pounds, F. O. B.

Our process is patented.

In ordering, send sample of roast, so that we can match your goods.

Terms: Thirty days, two off for ten days.

Yours, etc.,

THE DOWLING MFG. CO.

On examination of the sample it was found to be a very perfect imitation of the coffee bean in size, shape, and

color, even to the irregular groove on one side of the bean. It lacked, however, the thin membrane, which on all genuine coffee extends to the centre of the bean, and whose broken edge appears in the groove.

The imitation had no coffee taste. Under the microscope it appeared to be composed almost entirely of starch cells, probably of rye flour, mixed with chicory, and just a trace of coffee.

This composition has probably been baked, and colored to the desired shade with caramel.

Part VII of Bulletin No. 13, Division of Chemistry, United States department of agriculture, contains a copy of a circular letter accredited to the Dowling Manufacturing Company, but makes no further mention of the company or of their compound.

The circular letter was as follows:

The success of the season. Java coffee compound, one pound package, whole bean, sixty pounds to case; cost ten cents per pound; retail it for fifteen, and give better value than you now do for twenty four. Send us your order at once. Draft or post-office order must accompany it.

If for any reason you wish to return Java coffee compound within thirty days of its receipt, do so at our expense and we refund money. You won't return it, but will order more.

Very truly yours,

THE DOWLING MFG. CO.

Reference: Produce National Bank.

A sample of the so-called Kunst Kaffee, sold by M. Kliemand, bears also attached:

This coffee, as mentioned above, is not manufactured in the country, but is imported from Germany, and must, as provided for in the tariff of 1890, in paragraph 321, pay an import tax of one and one half cents per pound.

This bean is described in Bulletin No. 13 as a rather

poor imitation of roasted whole coffee beans. Composition: Wheat flour, coffee, and chicory.

An imitation coffee bean is also manufactured by the Northwestern Spice Company, of Sioux City, Iowa.

They also, like the Dowling Manufacturing Company, in order, apparently, to give dealers a confidence in the merit of their goods, and to show how much greater benefit the people will derive from their imitation than the true coffee, furnish a chemist's certificate.

The following are copies of their letter and the chemist's certificate, as obtained:

DEAR SIR: We send you to-day, by mail, a sample of our coffee sub., which we can furnish you at four cents a pound, less one half cent per pound rebate for freight. Also a sample of our imt. coffee beans, at eight cents per pound, less one half cent per pound rebate for freight. These goods are strictly vegetable, and not a thing in them injurious, which is in favor of our goods over many others in the market.

Yours very truly,
NORTHWESTERN SPICE CO.,
Per J. P. HAYNES, *Treasurer.*

GENTLEMEN: We append below copy of certificate of analysis of our product, made by a chemist of Louisville, Ky., which speaks for itself.

Yours respectfully,
NORTHWESTERN SPICE CO.

OFFICE OF J. P. BARNUM CO.,
DISPENSING, MANUFACTURING, AND ANALYTICAL CHEMISTS,
LOUISVILLE, KY., June 1, 1891.

This will certify that I have examined a sample of coffee manufactured by the Northwestern Spice Co., of Sioux City, Iowa, received from Chas. J. Bouche, and after a thorough and exhaustive examination of the sample furnished, I can assure you that it is not only perfectly harmless, but also nutritious. It is wholly vegetable,

can be combined with any grade of coffee to advantage, and even when used alone affords a very fine beverage.

I have had occasion to examine coffee substitutes for many years, and consider this undoubtedly the best of any hitherto submitted.

[Signed] J. P. BARNUM,
Analytical Chemist.

The beans obtained as samples from this company were a much poorer imitation of the genuine than any of the preceding. The color was too light, and the shape was not perfect.

In many of the beans a line, extending over the surface of the bean at its greatest circumference, protuded, as if the moulding operation had been performed in forms that had closed imperfectly, thus giving a somewhat flattened appearance to the bean. On examination they seemed to be composed almost entirely of wheat flour.

At the time of the examination, in 1891, of some coffees and teas, by this department, samples were obtained of an imitation coffee bean manufactured by Louis M. Hall, 1017 Chestnut street, Philadelphia.

This, in appearance, was one of the best imitations of the genuine coffee. It was composed of wheat-flour, and colored, probably with caramel, which gives a brownish color to its water extract. This bean is also noted in Bulletin No. 13, to which references have been made in these pages.

A copy of the circular letter sent out by this firm I take from that report:

DEAR SIR: I send you, by this mail, a sample of imitation coffee.

This is a manufactured bean, and composed of flour. You can easily mix fifteen per cent. of this substitute in with genuine coffee, that ranges in price from twenty to twenty-two and a half cents, and it will improve the flavor of the same; is granulated the same as coffee.

If you deal with us, it will be in the most strict confidence.

This SS. coffee (superior substitute) is packed in barrels; weight, about 170 pounds to barrel. By the use of our bean, you can increase your profits to one and a half cents per pound, and improve the flavor. Try a sample barrel. Price eleven and a half cents per pound, net, ten days. No attention paid to postal cards.

I would not show samples, even to employés.

Yours,

L. H. HILL,
Sole Agent.

A sample was also obtained of an imitation bean much inferior in appearance, the manufacturer of which, and the locality of the manufactory, I was unable to ascertain. The bean was quite light colored, the surface usually cracked in a number of places, as though the bean had been quite wet when moulded, and had cracked on drying or roasting. It is composed almost entirely of flour, probably wheat.

The same bulletin reports an imitation coffee bean, composed of wheat flour, manufactured by the Swedish Coffee Company, New York.

I have seen statements that imitation beans were manufactured also in one or two places in New Jersey, in Ohio, and elsewhere, but have been unable either to locate definitely any such manufacturer, or to find any printed report that did.

Two hundred and seven samples of unground coffee were collected, for the purpose of ascertaining the quality of the bean and the adulterant when bought in this form; also to find if the imitation coffee bean was much used in this state.

These samples were collected in Albany, Binghamton, Ogdensburg, Oneonta, Oswego, Rochester, Rome, Syracuse, Troy, Utica, Waterford, and Watertown.

The result of the examination of these samples is given in the appended table. Twenty-one samples, or over ten per cent., were found to be adulterated.

In only three samples were there any imitation coffee beans detected. This, however, may not represent the real proportion of the article actually dealt in, since in the collection of the samples for analysis by the collector, dealers often suspect the object of the purchase, and sell a genuine article.

Four samples were found to contain whole roasted peas. To obtain them in the desired form the peas are steamed, rolled out flat without bursting them, and roasted. This gives them an appearance very similar to the coffee bean, both in size and color. The shape is necessarily different, but so much like, that a mixture of fifty per cent. coffee and five per cent. peas would escape detection by the average consumer, unless special attention were directed to the appearance of the mixture.

It was probably the expectation of all the dealers who sold adulterated, unground coffee, that the coffee would be ground before leaving their stores, and fraud would thus escape detection, the purchaser's suspicion, if he had any, being allayed by having the grinding done in his presence.

The following, a copy of a little printed slip, was taken from a pound can of unground coffee, to which about fifty per cent. of adulterants had been added:

Read carefully the following directions:

To get the best results from Broken Java, the entire pound should be ground at once, in order that all may become thoroughly mixed. This is important. Then replace in the jar (which is air-tight) so that the strength and flavor will be preserved, and use as required. Prepare same as you do ordinarily, only use a little less of Broken Java, as it has a greater strength.

Mason fruit jars were given with one pound of coffee in three samples, each one of which was found to contain adulteration.

It was the purpose of this department to obtain, if possi-

ble, fair samples of ground coffee. By ground coffee was meant coffee that was offered for sale already ground, not such as was ground after a sale. Some few of the samples obtained were ground after purchasing, though nearly all belong properly to the ground coffee class.

But very few are found to be entirely free from adulteration.

The commonest adulterant was chicory. The *American Grocer* has estimated that the annual importation of chicory amounts to about 6,000,000 pounds. In response to an inquiry the collector at the port of New York has kindly furnished the following information:

During the year ending June 30, 1892, there was entered at the port of New York alone, 3,432,470 pounds of material classed as coffee substitutes, and dutiable as follows:

Coffee substitutes dutiable at one and one half cents per pound, as provided for in paragraph 321, tariff of 1890, 1,834,275 pounds.

Chicory and coffee substitutes, where chicory is found to be the chief component ingredient, dutiable at two cents per pound, as provided for chicory, in paragraph 317 of the same tariff, 1,578,195 pounds.

A large number of proprietary coffee substitutes are now manufactured. These are nearly all made to have the size, color, and general appearance of ground coffee, and are used to a large extent for mixing with ground coffee. Sometimes without further adulteration, at other times with chicory, or both chicory, peas, or other cereals.

These compounds were detected in a number of the samples of ground coffee examined, though their detection is somewhat difficult when mixed with ground coffee and other substances.

The names of some of these manufacturers were learned, and their samples and prices were obtained in a number of cases.

The following is the advertisement of one of these companies, copied exactly as printed:

The most valuable discovery of the age, patent applied for. Hillis's Crown Cereal Coffee, which, for superiority of style and drink, has been pronounced as marvellous by numerous eminent coffee merchants. It is admirably adapted for use with whole, crushed, or granulated coffee. It makes a rich and most delicious drink. It can only be improved by the addition of a portion of the very best Java, Maracaibo, Santos, or Rio. It retains its strength and freshness in any climate. It comes in barrels of 250 pounds, not costing less than one fourth of the present price of coffee.

Hillis's Crown Cereal Coffee is no heavier than any other roasted coffee. So closely resembles ground coffee it is almost impossible to tell the difference. Three grades: No. 12, fine; No. 10, medium, and No. 8, coarse. Samples and prices to the trade on application, free. Special prices to buyers of fifty barrels and car-load lots.

We suggest that before purchasing any other such goods, you draw and compare ours just as you do coffee, as there are worthless and fraudulent goods being offered under various forms of misrepresentation. Use no more common or low grade coffee. Use no more chicory, peas, or rye. Place your orders for Hillis's Crown Cereal Coffee and keep pace with wide-awake dealers who are using it all over the country.

HILLIS'S PLANTATION COFFEE CO.

Here is a fair sample of much that is printed, apparently for the purpose of disarming public prejudice, and of convincing the people that a dough, made up of various cereals and beans, colored and baked, is more valuable in furnishing a drink to be called coffee, than coffee itself. This is taken from the *American Analyst*, of October 15, 1892:

There are thousands who would like to enjoy the luxury of drinking coffee, but are prevented by hygienic reasons. Others again who may allow themselves the luxury are afraid that the taste will grow up in them and they become "coffee fiends."

A few, unfortunately, cannot afford the luxury. For all such a new article just introduced in this market, Hillis's plantation coffee

substitute is a boon. It preserves the merit of being a healthful vegetable preparation which very closely resembles real ground coffee. It looks, smells, tastes, and draws very much like the genuine article, and can be mixed with it in any proportion. Coffee possesses many characteristics in being a warm stimulant, but as it contains the powerful alkaloid caffein many people can not drink it. This substitute possesses all the good qualities but not the caffein. It costs only about one third as much as coffee.

It is made in three grades, fine granulate No. 12, medium No. 10, and coarse No. 8, which vary in strength from thirty to eighty per cent. of that of the genuine coffee, and is sold in barrels and casks holding from 100 to 800 pounds. It is especially recommended to dyspeptics who cannot drink coffee.

Samples of this compound were obtained and examined. The different numbers represent merely different degrees of fineness or coarseness in grinding. A sample was also obtained of what is called No. 3, which was quite large lumps, and which they stated to be as coarse as they ever sold, although it could be made to order almost any size or color desired.

Number 12 is composed of quite fine granules, that have evidently undergone a sifting process, as all are of similar size, with no dust or coarse particles. They were composed largely of pea hulls, barley, and other cereals, beans, and flour, some chicory, and still more unrecognized material with no coffee.

This company previously had manufactured another compound, called "Plantation Coffee Mixture," which in appearance and composition was very similar to the Powell substitute.

The Clark Coffee Company, of Boston, were manufacturing a composition which they sold in two forms, under the names of coffee pellets and crushed coffee pellets, samples of which were obtained and examined in 1891.

Of these the United States Report, Bulletin No. 13, page 916, says:

Coffee pellets, molded, but not in the form of coffee beans, when mixed with ground coffee, would escape the notice of the purchaser; also, probably, in mixture with whole coffee. Composition: Wheat flour and bran; rye also probably present; price, six cents per pound, or five and a half cents in ten-barrel lots. The manufacturers claim that an addition of thirty-three per cent. of these "pellets" to genuine coffee will make "an equal drink to the straight goods." The manufacturers, after making extravagant claims for their product, state, with evident intention to further a fraud, that it is uniform in color, and can be furnished any desired color of roast.

The same bulletin gives the company's letters, page 917:

GENTLEMEN: We desire to call your attention to our improved grade of coffee pellets, which we mail you sample of to-night. The bulk of the goods has been increased, and the drinking merit still further enhanced, as a test of the goods will demonstrate. To exhibit the value of our goods, and show the extent they can be used with good results, we mail you samples of a compound coffee, made as follows: Seventy-five per cent. pellets, fifteen per cent. coffee, ten per cent. chicory.

This makes a very desirable cup of coffee, equal to any low-grade, straight coffee, and costs, on basis of five cents per pound for pellets, seven cents per pound. By the use of thirty-three per cent. of our new pellets in fine goods, the same result is obtained as from the straight goods alone.

We believe a thorough test of the coffee pellets will convince you that the goods are the most valuable adjunct of the coffee business on the market.

We will be pleased to quote prices on quantities.

Yours respectfully,

CLARK COFFEE COMPANY.

GENTLEMEN: We desire to make a proposition to you, which will be for your interest to consider.

We are manufacturing a coffee substitute which is unquestionably far ahead of anything in its line, which we term "coffee pellets." The merits of these we will not dilate upon, but simply ask that you give them a fair trial. They are put out in size used for crushed

coffees, and are the best for that purpose upon the market. We understand you are using peas extensively, and we propose, if we can get your attention on the goods, to compete with that article on a basis of uniform price. Our goods are four ounces lighter in bulk to the pound than peas, and double the quantity can be used with better results. As far as appearance is concerned, of course our goods have considerably the best of it.

We mail you sample to-night, and our Mr. Clark will be in your city the first of next week, and we would ask that you see if it is not for your advantage to use our goods.

Hoping you will give it your attention, we remain.

Yours respectfully,

CLARK COFFEE COMPANY.

In addition to these coffee pellets, which were of cylindrical shape, averaging one half inch in length, they sold also what they called "Crushed Coffee Pellets," of exactly the same composition, but smaller, irregular lumps, as though they were broken pieces, obtained in manufacture of the pellets, or else the pellets ground.

This company is now manufacturing compounds which they call "Granulated Coffee Compound" and "Crushed Coffee Compound," selling either at four and one half cents per pound.

The crushed compound has been baked, and apparently molded, to some extent at least, then broken into rather coarse lumps. It has a dark look, with light spots, the preparation before baking not having been ground fine. It contains a considerable amount of cocoa hulls with pea, bean, and cereal bran and flour.

The granulated has a very similar composition, but constituents had been simply roasted, not baked.

The Northwestern Spice Company manufactures also a coffee substitute which it sells at four cents a pound, less one half cent rebate for freight. This substitute in appearance is very similar to the Clark Crushed Coffee Pellets, mentioned above. It is composed mainly of wheat flour.

The letters of the company, and the accompanying chemist's certificate as to the quality of these goods, have already been given.

The Powell Manufacturing Company manufactures several brands of coffee substitute, for which they have different names, viz., Royal, Royal X, Royal XX, Royal C. J. Their letters will give prices and claims:

GENTLEMEN: We mail you sample of our "Royal Coffee Substitute," and beg to quote you as follows: In five to ten barrel lots, four cents, F. O. B., N. Y.

Special price on quantities. We would be pleased to have an order from you. Our terms are thirty days.

One per cent.—ten days.

Awaiting your favors we are,

Very truly,

POWELL MFG. CO.

Inclosed with the letter was the following:

Our constant aim is to make our preparation the best in the world.

To coffee roasters and merchants:

We respectfully call your attention to our "Royal Coffee Substitute."

One trial will convince you the "Royal" is the best to be had, and consequently the cheapest in the end to use.

It is a compound of healthful vegetable substance, is positively neutral in character, and can be used in larger proportions to better advantage than any "substitute" manufactured.

It can be used in proportion of one third to one half with all grades of ground coffee. It is always uniform, both in color, and grain. Its drawing qualities are unsurpassed, lending color, body, strength, and flavor. Drawn by itself it makes a palatable beverage similar to coffee.

It costs about one fourth as much as coffee.

We are supplying the best trade throughout the country. Send for samples and quotations.

POWELL MFG. CO.

The sample obtained from them, which in the letter they call the "Royal Coffee Substitute," was composed almost entirely of roasted pea bran or pea culls.

This they sell as noted at four cents per pound.

Pea culls can be obtained for seventeen dollars per ton or less than nine tenths of a cent per pound. The company could afford to roast and sell at four cents, and might possibly make a small profit on the sale.

The Gillies Coffee Company were producing in 1891 several brands of coffee sold in packages or bulk lots, to suit customers as their circular will show:

To the jobbing trade only:

Forty years' study.

How to produce a good family coffee at a price within the reach of every individual. Handsomely packed in tinfoil packages, forty-eight pounds to a case, or in bulk, barrels, and half barrels.

AMERICAN MOCHA COFFEE.

One hundred box lots, forty-eight pounds each, per pound, five cents net.

PASHA ALI'S ARABIAN COFFEE.

One hundred box lots, forty-eight pounds each, per pound, eight cents net.

GOLD MEDAL JAVA COFFEE.

One hundred box lots, forty-eight pounds each, per pound, ten cents net.

The above goods will be packed, if desired, under purchaser's "Own Brand," at prices quoted without extra charge. This will give the jobber his own brand of coffee that he can control, and not be obliged to cut prices on account of other houses selling the same brand of goods.

Orders by mail solicited.

THE GILLIES COFFEE COMPANY,
Coffee Roasters and Grinders.

Samples were obtained in pound packages labelled as de-

scribed in the circular: American Mocha Coffee, Pasha Ali's Arabian Coffee, and Gold Medal Java Coffee.

On none of the packages was the word "compound" printed or written, or anything else whereby a purchaser could possibly suppose he was getting anything else than pure coffee. In place of anything stating the true nature of the coffee, on one package was printed the following:

TESTIMONIAL.—I have carefully tested and analyzed the samples of Pasha Ali's Arabian Coffee, you sent to me for examination, and I have no hesitation in pronouncing it far superior to the ordinary coffees, and further, from its extreme delicacy and purity of flavor can be drank with perfect impunity by invalids and all who from their nervous organization are obliged to abstain from the use of the ordinary qualities of coffee.

J. B. BROWN,
Professor of Chemistry.

On examination of the samples, "American Mocha" was found to consist of roasted cereals, probably a large per cent. rye with small amount of peas, a large amount of cocoa hulls, a small amount of chicory, and no coffee.

"Pasha Ali's Arabian Coffee" contained the same substances as were found in the American Mocha,—roasted cereals, probably rye and peas, cocoa hulls and chicory, and no coffee. The percentage composition may have varied slightly.

"Gillies Gold Medal Java Coffee" was found to contain a large amount of peas, a large amount of chicory, cocoa hulls, and a very small percentage of coffee.

In November, 1892, samples were obtained from this company which had some of the old names, and some new. Some of these were Pasha Ali's Arabian Coffee, Extra Ground Rio Coffee, Gillies Mokajava Coffee, American Java Coffee, Dandelion Coffee, etc.

Pasha Ali's Arabian contained pea hulls, cocoa hulls, rye probably, small amount chicory, but no coffee.

Mokajava was found to consist of coffee alone.

Extra Ground Rio contained a large amount of pea hulls, cocoa hulls, small amount of chicory, and a small per cent. of coffee.

American Java contained large percentage of peas, large amount of chicory, with small per cent. of coffee. The manufacturer's advertisement states,—"One china coffee cup and saucer given away with each pound of the American Java coffee."

Dwinell, Hayward & Co. manufacture and sell as follows:

French Breakfast coffee, in bulk, five and one half cents.

Excelsior Breakfast coffee, in bulk, four and one half cents.

Coffee Substitute, in bulk, five and one half cents.

Crushed Java, in bulk, fourteen and one half cents.

French Breakfast was found to be composed of very large per cent. peas, cereals, and very small amount of chicory. No coffee.

Excelsior Breakfast had essentially the same composition as the French Breakfast; no coffee present.

Coffee Substitute had the same appearance and composition as that called the Crown Cereal Coffee, manufactured by the Hillis Company.

Crushed Java contained a large amount of cracked coffee beans mixed with a considerable percentage of chicory, roasted corn, and Coffee Substitute just mentioned.

Both the packages of French Breakfast and Excelsior Breakfast coffee had the word compound printed in small type and in an inconspicuous place.

There are now on the market quite a number of so called cereal coffees, which the sellers usually state are mixtures of roasted cereals. Some of these were obtained and examined.

Ayer's Hygienic Substitute consisted of roasted rye, peas, and chicory, no coffee. It is sold at twenty cents per pound.

The manufacturers claim that this coffee substitute is in strict accord with its name, hygienic, or health-giving; that "it is composed of ingredients which neither stimulate nor depress the natural functions of the body, but impart to it nourishment. It is meant to take the place of such drinks as tea and coffee, the destructive effect of the use of which may be traced in the sallow countenances and nervous manners of multitudes on every hand. Why partake of those things which injure, when you may be aided and even gratified by the harmless and wholesome substitute which we offer? A fair trial will convince you of the truth of these statements."

"Gladding's Cereal Coffee" is described as "a delicious beverage and far more wholesome than coffee. The same amount of this cereal coffee will go farther than ordinary coffee. It has a fine coffee flavor. It also makes an excellent after-dinner coffee."

On examination it was found to be composed of roasted rye with some chicory and a small percentage of coffee. Price, twenty-five cents per pound.

For Dr. Johnson's cereal coffee few claims were made other than that it is "an excellent substitute for the coffee berry. A palatable, nutritious, and wholesome beverage. Contains nothing that will change milk into an indigestible substance." It was composed of a mixture of rye, peas, and chicory, with no coffee.

The claims that are usually made by these manufacturers seem extravagant and misleading.

The prices charged are generally out of proportion to the value of the constituents. Otherwise they are unobjectionable, and may even be nutritious.

The following statement in regard to a company whose only business is the manufacture of coffee substitute is given as an indication of the magnitude to which this industry has grown. These extracts have been copied directly from one of the New York papers of August, 1892:

. . . Coffee Co. Incorporated under the laws of the state of . . . . Capital stock, $2,000,000. Par value of shares, $100 each. Divided into —— shares preferred stock ; —— shares common stock. Full paid and non-assessable.

Dividend upon the preferred stock is eight per cent. per annum, payable semi-annually.

The preferred stock also participates in the division of the profits pro rata with the common stock after eight per cent. has been paid the common stock, and five per cent. has been placed to credit of surplus fund.

* * * * *

The entire proceeds received from sale of preferred stock will be devoted to the extension of the business, purchase of new and improved machinery, and in perfecting the present plant.

The . . . Coffee Co. offer for sale . . . . shares of preferred stock at par . . .

This company own the interest in lease, machinery, and fixtures of its plants situated in ———, also No. —— and Nos. ——, and ——— street, and No. —— street, New York, including all the assets, patents, and trade-marks, and have a capacity to turn out 500 barrels of their product daily.

It has been impossible to learn how much of this manufactured product is put on the market every year. It would be very difficult to form an approximate estimate of the amount, on account of the great unwillingness of the manufacturers to answer any questions, and the total absence of statistics on this subject.

The examination of the ground coffee has shown the presence of roasted peas in a large number of samples. This seems to be a very popular adulterant at present, and many coffee roasters roast their own peas. The pea is rolled out as flat as possible without breaking the covering of thin skin, and, after roasting, is ground, or, as will be noticed in the tables, is frequently used unground.

The ground shells or hulls of the cocoa bean were found in a considerable number of samples. Whatever may be

said for or against the decoctions made from the roasted cereals, but very little could be claimed for benefits to be derived from ground cocoa hulls.

A large number of other adulterants are usually found mentioned in books describing coffee adulterations, among which may be mentioned the mangel-wurzel, roasted acorns, sawdust, figs, oak bark, and baked liver. Blyth mentions in addition ground date stones, vegetable ivory, cassia occidentalis in Mogdad coffee, etc., etc. In a late number of a trade paper, celery and celery trimmings that have been dried, roasted, and ground are said to be used for coffee substitute. None of these adulterants have been detected in the samples examined for this report.

In the report of the Inland Revenue Department of Canada, on the examination of coffee during the years 1891 and 1892, the main adulterants detected were chicory, peas, "roasted cereals," "roasted grain," in some cases corn, maize, or wheat.

The *Zeitschrift Fur Angewandte Chemie* for September 15, 1891, contains a report by Heinrich Trillich, on a large number of proprietary, cereal, and imitation coffees that were found on sale in Germany. He notices that also in Germany the sale of roasted cereals in coffee mixtures has increased immensely in the last few years. Chicory has been the most used adulterant, and a large amount of "Feigenkakee" (fig coffee) had been used, especially in southern Germany and Austria, but these are giving place to roasted cereals.

It has been shown that nearly all the substances used as coffee substitutes either are entirely devoid of coffee or else contain but a very small percentage of it, but that all are manufactured with special care that the decoction made from them may have the brown color of coffee and a bitter taste, which people buying will suppose is coffee taste.

Some substitutes, especially the cereals, are nutritious, but the law should not allow their sale as coffee nor in

coffee, except in properly labelled packages. The package should be labelled in such a manner as not to deceive the purchaser. If it consists entirely of cereals or chicory, it should not be labelled "Coffee," nor even "Cereal Coffee." Deception is practiced by printing the word coffee large and prominently and making the descriptive words inconspicuous. The term coffee should be restricted to coffee alone. In compounds the label should declare all the substances that have been used in the composition, and the exact amounts of each.

The results of this examination have shown that but very few samples of ground coffee on sale in this state are adulterated. Many contain scarcely any coffee. In nearly every case the prices charged were as high as those for lower grades of pure coffee.

In the sale, both of ground and unground coffee, an evident attempt is being made to deceive purchasers, as a number of the printed advertisements and certificates reproduced in this report prove.

TABLE OF SAMPLES EXAMINED.

COFFEE GROUND.

Number of samples.	Date of collection, 1892.	Of whom purchased.	Where purchased.	Price per pound.	Cold water test.	Microscopic examination contains
3,760	October 14	Brady	Albany	$0.25	Yellow	Coffee and chicory.
3,763	October 14	S. Campbell	Albany	.25	Brownish yellow.	Coffee, chicory, and pea hulls.
3,764	October 14	S. Campbell	Albany	.25	Deep brown	Chicory and peas; no coffee.
3,765	October 14	Brady	Albany	.20	Brownish yellow.	Coffee, chicory, and peas.
3,766	October 14	Great Atlantic and Pacific Tea Company	Albany	.25	Brownish yellow.	Coffee and chicory.
3,767	October 14	Union Pacific Tea Company	Albany	.22	Brownish yellow.	Coffee, chicory, and peas.
3,768	October 15	W. E. Drislane	Albany	.15		Compound, probably Clark's, containing cocoa hulls.
3,769	October 15	W. E. Drislane	Albany	.25	Yellow	Coffee; no foreign matter.
3,774	October 14	Cont. American Tea Co	Albany	.20	Brownish yellow.	Coffee, chicory, and baked compound, probably Clark's crushed.
3,776	October 19	W. F. Kearney	Albany	.25	Brownish yellow.	Coffee, chicory, and peas.

PULMONARY TUBERCULOSIS.

In the reports of this board for the years 1890 and 1892, we gave considerable space to the subject of tuberculosis, but since this disease destroys more lives each year than any other malady that affects mankind, and is also a preventable disease, we feel that the subject should be kept constantly before the people. It is known in every community in this state, and spares neither the young nor the old; its victims are in all classes and ages. The disease is no longer mysterious or inexplicable: its nature is completely understood. It is a communicable germ disease. This fact, now demonstrated beyond a doubt, places it forever in the list of preventable diseases. So conclusively has this been proved within a very recent period, that a radically different view of the disease is presented than formerly, and energetic efforts are being made in many states to restrict its spread by instructing the people in the means and measures necessary to control it. When the public shall have become better informed upon these points, it is not improbable that the health authorities will require every case of pulmonary consumption to be reported, and certain definite measures carried out for the protection of the family and the public.

In Pennsylvania a society for the prevention of tuberculosis has been formed, the efforts of which are confined to diffusing knowledge concerning the disease. The following circulars have been widely distributed among the people of that state:

HOW TO AVOID CONTRACTING TUBERCULOSIS (CONSUMPTION).

[Published for Gratuitous Distribution by the Pennsylvania Society for the Prevention of Tuberculosis.]

Tract No. 1.

Tuberculosis, popularly known under the names of consumption, decline, scrofula, marasmus, wasting disease, inanition, lupus, and white swelling, is a contagious disease, which means that every new case is produced by exposure to some other case. The knowledge of this fact gives the key-note to personal avoidance of the disease. Fortunately science has demonstrated how a person suffering from tuberculosis can give it to another, and hence we know just what to do to avoid getting it. This knowledge moreover brings us great consolation, for it takes away all cause for fear and for oppressing the unfortunate victims of the disease. To avoid consumption ourselves we do not have to be unkind to our dear ones who have it, nor to deprive them of the society of their relatives, or in fact of any of the comforts of this life. The contagium of tuberculosis lies entirely and alone in pus (matter) given off either in the form of spit in consumption, of matter in abscesses and in lupus, or of discharges from the bowels in marasmus and in tuberculosis of the bowels. In short, pus (matter) given off from a tubercular sore, wherever it may be, is the means of giving the disease to somebody else.

This tubercular pus can find its way into a healthy person principally in three ways: First, through the stomach; second, through the lungs, or third, through an open wound. First, through the stomach—when people eat imperfectly cooked tuberculosis meat, drink milk from badly diseased tubercular cows, eat food out of the same dishes or with the same eating utensils as consumptives, eat food with unwashed hands after having been in contact with tubercular patients, eat food that has been handled by persons suffering from tuberculosis, put coins, articles of toilet, or other small objects that have been handled by persons suffering from tuberculosis into the mouth, use musical instruments or implements which, when in use, are placed to the lips or in the

mouth and which have been used by consumptives, kiss upon the lips persons suffering from consumption, swallow tubercular pus in the form of dust which has accumulated in the throat and fauces during the act of respiration. Secondly, through the lungs—when people inhale dried-up tubercular pus in the form of dust. Thirdly, through wounds—when people get tubercular pus into an open cut or an abrasion of the skin.

Of the three ways in which the disease germ gets into the system, that by the stomach is the most frequent. There is not so much danger of getting tuberculosis by eating meat and drinking milk that people need to be afraid to use these articles. Thorough cooking destroys the bacillus tuberculosis and therefore removes all danger; but even this need not be resorted to in the case of milk when the dairyman is known to be careful and honest. If you do not know your dairyman you had better boil your milk. You can do most towards protecting yourself against tuberculous meat and milk, however, by exerting your influence to bring about proper government inspection of slaughter-houses and dairies. If you are living in the same house with a consumptive be careful not to use the same dishes and eating utensils unless they have been first thoroughly boiled. Above all things do not eat of the delicacies which have been sent to the invalid and which he has eaten of, nor help him sip his wine. When you have been in contact with tubercular patients wash your hands at your earliest convenience, and be sure to wash them carefully before eating. Do not buy any food from a person suffering from tuberculosis, and as a matter of general precaution, have all food which goes on the table raw well washed. Never put coins, articles of toilet, or other small objects into your mouth, for they may have been used by a consumptive just before falling into your hands. This is particularly true of money, and when such has been handled the hands ought to be washed before eating. A most prudent habit to form is never to eat without first having carefully washed the hands. Do not use a pipe, wind instrument, such as a flute or horn, or an instrument or implement which goes to the lips or into the mouth, that has been in use by a consumptive. Do not kiss persons on the mouth who are suffering from tuberculosis of the lungs when the disease has arrived at the stage when they begin to spit. Even with the cleanliest persons some sputa will adhere to the lips when a handkerchief

has been used. When you have for any length of time been in a room with a consumptive, in which perfect sanitary measures are not practised, do not swallow your spittle until you have had an opportunity to rinse your mouth and throat. If you are compelled to be about a consumptive frequently, endeavor to have him disinfect all the tubercular pus immediately upon its being thrown off, for in this way you protect yourself against all danger. Should you not be in a position to see this carried out, avoid as far as possible inhaling dust in the room or upon the premises. Never allow clothing or furniture that has been used by a consumptive, or that has been kept in a house occupied by a consumptive, to come into your house or room until it has been thoroughly disinfected. When you are compelled to change your residence be sure to make inquiry about the house into which you are going to move as to whether or not it has been occupied by a consumptive, and if it has, see that it is thoroughly disinfected before you move into it. The walls of the room which was occupied by the consumptive ought to be scraped and washed with some powerful disinfectant, such as mercury or carbolic acid.

There is a great deal in family and individual predisposition to tuberculosis. If any of your family have died of the disease it is some evidence that you are prone to it, and you ought as a matter of prudence to keep away from it as much as possible. Individual predisposition is usually acquired and consists chiefly in a run-down condition or a deformed or improperly developed chest. If you are suffering from dyspepsia do not permit it to run on, but have it remedied at once. Stomach troubles are powerful predisposing causes of tuberculosis. Malnutrition of any kind predisposes to the disease. If you are losing weight, or if you find that your food disagrees with you in any way, seek a remedy. Perfectly healthy digestion and assimilation are excellent guaranties against tuberculosis. Do n't forget, however, that the excessive use of alcoholic drinks produces indigestion and irritability of the digestive tract, and in this way becomes a prolific predisposing cause of tuberculosis. The loss of rest and worriment become predisposing causes by lowering the nerve force of the body and thus interfering with digestion and assimilation. Have regular hours of sleep and avoid worriment of all kind, but do this especially when you are unavoidably exposed to the disease. If you have a deformed or badly developed

chest you need to be especially careful not to expose yourself to tuberculosis. Develop and improve your chest by pulmonary gymnastics. Let your sleeping-room be well ventilated, and spend as much time as possible in the open air. If possible obtain employment which will keep you out-of-doors.

It has been shown that a non-porous soil predisposes to tuberculosis. If your dwelling-place is damp, see that it is properly drained and made dry by means of cement. If you can select your home, choose it on a porous open soil.

Impress indelibly upon your mind that no new case of tuberculosis can arise without an old one. If you can therefore absolutely avoid cases and every source of infection, you are safe whatever predisposing cause you may labor under. With the present prevalence of the disease, however, no one can avoid every source of infection, and it therefore becomes important that predisposing causes as well as sources of infection should be avoided.

HOW PERSONS SUFFERING FROM TUBERCULOSIS CAN AVOID GIVING THE DISEASE TO OTHERS.

[Published for Gratuitous Distribution by thy Pennsylvania Society for the Prevention of Tuberculosis.]

Tract No. 2.

The disease occurs in man and in animals, and can be conveyed from the one to the other. Animals, when they suffer from the disease, become a source of danger to human beings, because of domestic relations and because they supply food in the form of milk, or are used as food in the form of meat. They have no control over the disease, but are a passive means of spreading it.

Man, as a rational being, has entire control over the spread of the disease, when he himself is the victim. He can do this, too, without depriving himself of any of the comforts of life, or of the companionship of his relatives and friends.

His power to control the spread of the disease is absolute, and it is so because the contagium, by which is meant the infecting particles, is confined entirely to the matter given off by a tubercular sore, wherever that sore may be located. The infecting agent of

tuberculosis is a little microscopic disease germ, called the bacillus tuberculosis. Tuberculosis cannot exist without this germ—cannot be produced without it—and, when it exists, this germ is invariably given off, when the disease has progressed far enough, in the form of broken-down tissue, technically called pus. In consumption this broken down tissue is spat up, and is called sputum; in other forms of tuberculosis it is usually called pus.

The great and all important rule which must be observed by a person suffering from tuberculosis in order to prevent the spread of the disease, is to take away from all broken-down tissue its infecting power before permitting it to pass from under control. Every person suffering from tuberculosis has it in his power to do this.

When a consumptive begins to spit, he should, when possible, spit into a cup in which has been placed a germicide (a drug having the power to kill the germ). This cup should be made of material that does not corrode, and should be of a shape that readily permits of thorough cleansing. Paper-cups, which may be used, are to be had at drug stores, and they commend themselves for the reason that they are very cheap, and can be burned after using. A large china coffee-cup, with a handle, answers all purposes very well. As germicides, one may use carbolic acid (a liquid solution should be used, and thirty drops added to a half pint of water and this placed in the cup), corrosive sublimate (owing to the fact that corrosive sublimate coagulates albumen, it is well to use only tartaric acid sublimate, or citric acid sublimate tablets, which can be procured at drug stores—half of one tablet added to a half pint of water will give the proper strength), or ordinary lye, out of which soap is made. If no germicide can be obtained, at least water should be put in the cup. The cup should be thoroughly scalded with boiling water at least twice a day.

Handkerchiefs should not be used when it is possible to use a spit-cup. When, however, the sick person is out-of-doors, or is where he cannot use a spit-cup, he should provide himself with handkerchiefs made of material which is cheap enough to permit of being burned, and which does not readily absorb moisture. Paper is the best material for such purpose. It can be obtained at drug stores in a cheap and suitable form, known as "Japanese handkerchiefs."

Great care should be taken by a consumptive that his hands, face, and clothing, and when he is in bed his bed-clothes, do not

become smeared with the sputa. If any of these accidents happen —and they do happen very readily—the parts which have thus become infected should be cleansed at once with soap and water.

Kissing, especially on the mouth, should, under no circumstances, be practised by a consumptive. Shaking hands had also better be dispensed with. For the deprivation of these social customs, he will have the reward of knowing that he protects those near and dear to him.

A consumptive should not hold a situation in which he is compelled to handle the food or wearing apparel of others, or which brings him in very close relations with others. When the exigencies of life, however, necessitate his holding such position, he should exercise every possible care to prevent any of his sputa from getting upon his hands, or upon the articles which he handles, or upon the persons upon whom he waits. He should avoid coughing upon or in the direction of the food, the dining service, or kitchen utensils.

At the family table the consumptive should have his own eating and drinking utensils. These should be washed separately, and should be used by no one else.

The bed-clothes and linen of a consumptive, or of a person suffering from any other form of tuberculosis, should be thoroughly boiled before washing.

The living-room and bed-room of a consumptive, or person suffering from any form of tuberculosis, should be kept very clean, and should be frequently aired. As much sunlight as possible should be admitted.

Persons suffering from other forms of tuberculosis than consumption should observe the same general rules as consumptives, and should carefully destroy the infecting power of all matter given off from the tuberculous sore in the manner laid down for the disinfection of the sputa of consumptives.

The careful observance of the rules laid down in this tract will make the persons suffering from tuberculosis entirely harmless to their relatives and friends. It should be borne in mind that the breath of the consumptive is entirely devoid of danger. The disease-germ cannot be conveyed by the breath, but must be carried by the matter given off in the form of broken-down tissue.

Although it has already been said, it may be well to repeat for

the purpose of emphasis that a consumptive should never, under any circumstances, spit into a place where he cannot disinfect or destroy his sputa; and that, therefore, he should never spit into the street, into public places, or into cars.

We commend the above tracts to the people of New Hampshire. There is no doubt that if the recommendations contained therein were carefully followed, an almost marvellous result in curtailing this disease would be witnessed in a relatively short time.

At a recent meeting of the New York Medical Association, Dr. Porteus read a paper on the "Prevention of Disease" in which he made some strong points.

People showed greater interest in being cured of disease than in avoiding it. How many of us had ever succeeded in convincing a woman, or a man for that matter, that wearing narrow shoes had anything to do with producing their corns. They might admit the fact in their neighbor's case, but would deny it in their own. People inveighed against dirty water and filthy streets, but at their homes they drank water contaminated with their own excreta, and put up with surroundings which were far from cleanly. It was by persistent and intelligent application and spread of knowledge regarding the causes and the prevention of disease, that most good would be done by the medical profession. The discoveries of Pasteur, Koch, and others, had been of incalculable benefit in the prevention of disease, but the necessity for intelligent application of methods based upon their discoveries was shown by the fact that harm had sometimes resulted from their misapplication. The author impressed the necessity for carrying to a practical conclusion the principles enunciated from our laboratories, whereby we would be enabled, in great degree at least, to stamp out typhoid, diphtheria, cholera, and other infectious or contagious diseases. The question of preventing the spread of tuberculosis received more detailed mention. Dr. Porteus made it a custom to distribute among his clientele a card with the following printed instructions:

To Prevent Consumption.—Remember that it is an infectious disease communicated principally by the matter coughed up and spit out. The patient should spit in a cup or wide-mouthed bottle,

containing a little carbolic acid and water, and frequently washed with hot water. Use carbolic acid and water in commode. Never spit on the street, or floor of house, or cars. Sleep alone, and if possible in an airy and sunny room. Have separate bed and table linen; these should be boiled before washing. Use individual table utensils, washed separately. Wash the mouth twice daily with soda and water. Do not kiss any one.

Those who are well should remember that it is an infectious disease, communicated principally by swallowing the germs, by inhaling them, or having them introduced through a wound. Therefore, do not buy or use food that has been handled by a consumptive. Do not share the food or drink of a consumptive. Do not sleep with a consumptive. Do not put coins or small articles in your mouth that may have been handled by a consumptive. Do not use clothing until it is thoroughly disinfected, if it has been used by a consumptive. Do not kiss any one on the lips if they have a cough. Do not take food without first washing your hands.[1]

At a recent meeting of the New York state board of health, Dr. Edson said the subject was well summed up as follows:

First—Tuberculosis is a contagious disease, and is distinctly preventable.

Second—It is acquired by direct transmission of the tubercle bacilli from the sick to the well, usually by means of the dried and pulverized sputum floating as dust in the air.

Third—It can be to a great extent prevented by simple and easily applied measures of cleanliness and disinfection.

I have the honor to offer the following recommendations, based upon the foregoing premises, to the board for its consideration:

First—That circulars be sent throughout the state, setting forth the danger of the disease and the fact that the discharges from the lungs of tuberculous patients are not only dangerous to others, but also to the person afflicted, and also setting forth the danger of expectorating in places where the sputum is liable to be dried and carried by the air in the form of dust.

Cases should be reported to local health officers within seven days

[1] *Medical Record.*

of the time when the sick person comes under observation. Then the officers should take the necessary action.

Second—After the death of a patient, the room occupied by him should be thoroughly disinfected. The entire premises should be carefully treated.

Third—Suitable receptacles or cuspidors should be provided to receive the sputa. These should be put in all public places, such as railroad cars, factories, stations, etc.

He suggested that a circular embodying the following points should be approved by the state board of health, and distributed among local health officers, physicians, and others vitally interested in the matter:

First—Local health officers will register the name, address, sex, and age of each patient suffering from tuberculosis.

Second—When a notice of the existence of the disease shall be obtained inspectors will visit the premises and family, and leave circulars furnishing the necessary advice for preventing the spread of the disease.

Third—Premises which have been occupied by consumptives, when vacated by their death or removal, must be freed from all such articles as carpets, rugs, bedding, etc. Then these articles must be thoroughly disinfected.

Fourth—The authorities of all public institutions under the jurisdiction of the state board of health, such as hospital, dispensaries, asylums, prisons, homes, &c., shall be required to furnish to the state board of health the name and last address of every consumptive coming under observation within seven days.

It is the earnest wish and hope of the state board of health that an earnest and determined effort be made to restrict the ravages of the most prevalent and formidable disease with which modern civilization has to deal.

Consumption is a disease which can be taken from others. It is not simply caused by colds. It is usually caused by germs which enter the body with the air breathed.

What consumptives cough or spit up contains millions of these germs, any one of which may cause a person to get the disease. The matter dries and floats in the air in the form of dust. Then a well person may receive the disease from one afflicted by consumption.

Healthy persons may live safely with consumptives if the matter mentioned is destroyed. This matter should be placed in cups containing water, then the cups should be carefully emptied and washed twice each day. Consumptives should sleep alone.[1]

The Philadelphia Pathological Society, composed of many able physicians, has recently taken the following action relative to the infectious nature of tuberculosis:

WHEREAS, In the opinion of the Pathological Society tuberculosis is an infectious disease, and the society recognizes the fact that the most frequent source of infection is the human subject affected with the disease, and that there are many practical obstacles to be overcome before a generally accepted system of preventive measures can be established; therefore, be it

Resolved, That in the opinion of this society the line of action to be followed by the health authorities should be one of education and preparation of the people for future action, and that the first step in this direction should take the form of frequent and well propagated announcements to the effect that the health authorities are prepared to undertake, upon request of the attending physician, with the sanction of the family, the disinfection of premises vacated by tuberculous patients.

The state board of health of Michigan, under date of September 30, 1893, adopted the following resolution:

Resolved, That hereafter, consumption (and other diseases due to the bacillus tuberculosis) shall be included in the official list of "diseases dangerous to the public health," referred to in sections 1675 and 1676 Howell's statutes, requiring notice of householders and physicians to the local health officer, as soon as such a disease is recognized.

Accompanying the resolution was the following explanation, indicating the object of requiring notification of the disease:

In this resolution the question of isolation of the patient is not mentioned. Its purpose is to secure to the local health authorities

[1] *The Doctor of Hygiene.*

and to the state board of health information of the location of each case of this most dangerous disease, with the view of placing in the hands of the patient reliable information how to avoid giving the disease to others, and in the hands of those most endangered information how to avoid contracting this disease.

OBSERVATIONS UPON SOME OF THE CAUSES OF DEATH IN NEW HAMPSHIRE.

Without vital statistics it would be impossible to intelligently adopt and put into efficient execution measures for the restriction and prevention of disease, because there would be no basis of determining the necessity of action or for measuring its results. Fortunately, through the untiring efforts of several years, we have, in New Hampshire, arrived at a period of accuracy and completeness in the registration of deaths, second, probably, to that of no state in the Union, and which is of great value and importance to the state from more than one stand-point.

In the following pages, only a brief summary of some of the causes of death is given. Persons desiring to study more extensively the registration statistics—births, marriages, and deaths—are referred to the registration report, a copy of which may be obtained by application to the department of vital statistics.

The total number of deaths returned to the registrar of vital statistics for the year ending December 31, 1892, was 7,988. This is six hundred and seventy-eight more than was returned for the year 1891, and eleven hundred and fifty-three more than the average for the past nine years.

This excess over the average for the years stated is not due wholly to an actual increase in death-rate, but to a more complete registration than existed during the earlier years of the period embraced in the comparison. Still it is true that the death-rate has increased,—due chiefly, it would seem, to epidemic influenza. The progressive march of

this disease is indicated by the deaths attributed directly to it, as follows:

Deaths from epidemic influenza (la grippe)				1889,	4.
"	"	"	"	1890,	94.
"	"	"	"	1891,	143.
"	"	"	"	1892,	331.

That this malady is responsible for an increased death-rate from other diseases, there is no doubt. Pneumonia was increased from 673 deaths in 1891 to 890 in 1892. Other indications pointing to this conclusion may be seen by a careful examination of the tables presented:

TABLE No. 1.

Deaths and Death-rates from 1884 to 1892, inclusive.

Years.	Deaths registered.	Deaths to 1,000 of population.	Population.*
1884	6,194	16.26	358,845
1885	6,201	17.13	361,806
1886	6,426	17.61	364,767
1887	6,479	17.61	367,728
1888	6,854	18.48	370,689
1889	6,696	17.91	373,650
1890	7,368	19.56	376,530
1891	7,310	19.41	379,491
1892	7,988	20.88	382,452
Average	6,835	18.32	

* Population estimated for all but census years.

Table No. 1 gives the number of deaths returned for each year from 1884 to 1892, inclusive, with percentage to each 1,000 of the estimated population.

It will be seen by this table that the death-rate per 1,000 of the population for the year 1892, is 20.88, the highest recorded during the period embraced in the table. This rate is somewhat in excess of what we believe should be maintained in this state.

TABLE No. 2.

Deaths and Death-rates, by Counties, from 1884 to 1892, inclusive.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.	
	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.	Deaths.	Death-rates.
Rockingham	873	17.69	911	18.43	963	19.46	876	17.67	896	18.05	875	17.61	1,065	21.45	991	19.95	1,026	20.66
Strafford	627	17.07	619	16.73	609	16.33	673	17.91	688	18.17	691	18.11	801	20.83	809	21.04	864	22.47
Belknap	285	15.09	289	15.12	362	18.71	369	18.84	392	19.78	389	19.40	374	18.40	392	19.29	440	21.65
Carroll	333	18.31	269	14.80	303	16.68	294	16.20	328	18.08	298	16.44	303	16.71	341	18.81	342	18.87
Merrimack	736	15.48	796	16.63	833	17.29	835	17.22	920	18.86	891	18.15	983	19.88	951	19.23	1,064	21.52
Hillsborough	1,655	20.02	1,701	20.15	1,681	19.51	1,697	19.38	1,846	20.59	1,740	19.04	1,973	21.14	1,957	20.98	2,092	22.43
Cheshire	497	17.06	494	16.90	475	16.19	482	16.39	488	16.52	525	17.72	557	18.49	482	16.29	608	20.55
Sullivan	273	15.32	284	16.02	328	18.59	283	16.12	327	18.72	314	18.06	332	19.81	280	16.18	382	21.49
Grafton	652	17.06	611	16.05	616	16.24	602	15.93	655	17.35	625	16.67	651	17.49	648	17.41	749	20.01
Coös	263	12.88	227	10.87	256	12.00	368	16.89	314	14.11	348	15.32	329	14.17	459	19.77	421	18.13
Total	6,194	17.26	6,201	17.13	6,426	17.61	6,479	17.61	6,854	18.48	6,696	17.91	7,368	19.56	7,310	19.41	7,988	21.21

Table No. 2 shows the number of deaths and the death-rate per 1,000 of the population, census figures. The percentages being based upon the census returns, cannot, of course, be absolutely correct excepting for the year 1890; therefore the total percentage for 1892 is in this table too high. The figures given in table No. 1 (20.88 per 1,000) are more nearly correct.

The highest death-rate in any county for the year 1892, is in Strafford—22.47, followed by Hillsborough 22.43, Belknap 21.65, Merrimack 21.52, Sullivan 21.49, Rockingham 20.66, Cheshire 20.55, Grafton 20.01, Carroll 18.87, Coos 18.13.

TABLE No. 3.

*Percentage of Deaths, by Quarters, from 1884 to 1892 inclusive.**

YEARS.	PERCENTAGES OF DEATHS FOR QUARTERS ENDING WITH			
	March.	June.	September.	December.
1884	23.23	23.40	26.63	26.74
1885	27.27	26.66	24.32	21.75
1886	23.75	23.27	28.90	24.08
1887	24.56	24.02	27.77	23.65
1888	25.94	23.72	26.82	23.52
1889	23.70	24.16	27.38	24.76
1890	28.82	21.63	26.71	22.84
1891	22.36	24.15	26.89	26.58
1892	34.97	21.41	23.99	19.63

* Not including deaths with month not stated, premature and still births.

Table No. 3 shows the percentages by quarters, from 1884 to 1892, inclusive. The variation in the percentages for 1892 from those given for the previous year is very

marked, and is due to the erratic course of the epidemic influenza. In 1891 this disease prevailed more severely in the second and fourth quarters of the year, while in 1892 its greatest mortality was in the first quarter of the year. Again in 1892 there was a great reduction in the death-rate from cholera infantum, which reduces the percentage of the third quarter below that of any previous record.

The rate for the first quarter of the year 1892, is 34.97 of the total mortality; second quarter 21.41, third quarter 23.99, fourth quarter 19.63.

TABLE No. 4.

Mortality of Males and Females compared, 1884 to 1892, inclusive.

YEARS.	Male decedents.	Female decedents.	Male decedents to 100 female decedents.	Deate-rate of males to 1,000 male population.	Death-rate of females to 1,000 of female population.
1884.....	3,034	3,122	97.18	17.79	17.69
1885.....	2,948	3,194	92.29	17.28	18.09
1886.....	3,155	3,212	98.20	18.50	18.20
1887.....	3,174	3,267	97.15	18.61	18.51
1888.....	3,419	3,382	101.09	20.04	19.16
1889.....	3,253	3,389	95.98	19.07	19.20
1890.....	3,692	3,624	101.87	21.65	20.53
1891.....	3,557	3,453	103.01	19.60	17.65
1892.....	3,981	3,990	99.77	21.33	21.00
Average	3,357	3,407	98.50	19.32	18.89

Table No. 4 exhibits the mortality of males and females compared for the years 1884 to 1892, inclusive. With the

exception of the years 1888, 1890, and 1891, the female decedents have exceeded the males. By a comparison of the death-rates of the respective sexes to each 1,000 of the living population of that sex, it will be seen that the average mortality rate of the male population is slightly higher than that of the female.

In 1892, 3,357 male decedents and 3,407 female decedents were reported.

The death-rate of males to each 1,000 of the male population was 19.32.

The death-rate of females to each 1,000 of the female population was 18.89.

TABLE No. 5.

*Deaths at Age Periods, by Percentages, from 1883 to 1892, inclusive.**

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	Over 60.
1883.....	14.13	7.58	2.56	5.55	8.58	6.73	6.22	7.64	37.93
1884.....	16.22	7.36	2.61	5.30	7.93	6.26	6.33	7.75	38.38
1885.	15.98	7.14	2.11	4.42	7.50	6.71	6.71	7.76	40.09
1886.....	16.89	7.70	2.86	4.82	7.73	6.55	6.12	7.47	38.86
1887.....	17.64	7.26	2.05	4.89	6.96	6.25	6.56	7.72	39.70
1888.....	19.23	7.63	2.04	4.93	7.07	6.00	5.53	7.57	38.72
1889.....	19.44	7.71	2.66	4.64	6.56	6.15	5.93	7.63	38.40
1890.....	16.23	6.67	1.99	4.28	7.04	7.42	6.62	9.17	40.49
1891.....	18.30	7.08	2.55	4.40	6.95	6.01	6.29	8.15	40.25
1892.....	16.17	6.64	2.18	4.39	6.70	6.63	6.60	8.76	41.77

* Not including those with age not stated, premature and still births.

Table No. 5 is interesting in showing how uniformly the mortality by age periods occurs, even when distributed

over a series of years. It will be seen that nearly one fourth of all the decedents are under five years of age—a fact to which the eyes of all who are interested in the welfare of the race should be directed. Many of the causes which contribute to such a fearful mortality among children might be avoided by concerted public action in supporting remedial and preventive measures. In this special field there remains much to be done by the sanitarian and the health officer.

TABLE No. 6.

*Deaths at Different Periods, compared with the number Living at the Same Period, 1892.**

	Deaths, 1892.	Persons living at same ages, census of 1880.	Death-rate per 1,000.
Under one year	1,225	6,141	199.47
Under five years	1,727	30,573	56.47
Twenty to thirty years	506	63,252	7.99
All others	5,466	253,166	21.59
All ages	7,699	376,530 †	20.44

* Excluding still births and premature births. † Census of 1890.

Table No. 6 exhibits the number of deaths at different age periods compared with the number living at the same period, based upon the census of 1880, with the exception noted in the table. This table shows a death-rate per 1,000 of the population under one year of age of 199.47 as against 205.82 for the preceding year; and under five years of age, 56.47 as against 57.34 for 1891; between twenty and thirty, 7.99 in 1892, and 7.71 in 1891—practically the same; all others, 21.59 in 1892 and 18.90 in 1891; for all ages, the rate was 20.44 in 1892, and 18.65 the preceding year.

The difference in the death-rate between table No. 1 (20.88) and that of table No. 6 (20.44) is due to the exclusion of still births and premature births from the latter, while the former includes both.

Table No. 7 shows the number of deaths at different age periods by sex, from 1884 to 1892, inclusive. In the year 1892 there were returned 1,225 deaths of children under one year of age, not including still births and premature births; 502 between one and five; 165 between five and ten; 332 between ten and twenty; 506 between twenty and thirty; 501 between thirty and forty; 499 between forty and fifty; 661 between fifty and sixty; 975 between sixty and seventy; 1,185 between seventy and eighty; 864 between eighty and ninety; 129 between ninety and one hundred; 6 over one hundred; and 149 with age not stated.

Seventeen hundred and twenty-seven children died during the year before reaching five years of age—nearly a quarter of the total mortality of the state!

TABLE No. 7.

*Deaths by Ages and Sex, from 1884 to 1892, inclusive.**

YEARS.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Unknown.
1884....	Males	460	243	72	136	224	168	180	245	322	502	292	30	1	60
	Females	353	212	90	192	266	220	211	235	336	444	379	70	.....	51
	Not stated	3	1	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	4
	Total	816	456	162	328	491	388	392	480	659	946	671	100	1	115
1885....	Males	416	225	62	109	190	181	190	252	394	478	284	32	1	43
	Females	371	217	68	164	275	235	226	225	355	463	398	74	2	50
	Not stated	18	1	1	1	.....	.....	.....	4	2	3	.....	.....	.....	5
	Total	805	443	131	274	465	416	416	481	751	944	682	106	3	98
1886....	Males	487	273	94	132	205	188	198	228	368	499	317	42	2	33
	Females	385	221	90	178	292	233	195	252	339	447	397	83	3	28
	Not stated	19	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
	Total	891	495	184	310	497	421	393	480	707	946	714	125	5	64
1887....	Males	490	231	71	142	196	184	186	254	377	512	336	45	1	34
	Females	416	239	61	175	255	221	239	246	358	494	350	93	6	28
	Not stated	8	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	Total	914	470	133	317	451	405	425	500	735	1,006	686	138	7	63

1888....	Males	588	280	75	144	213	177	180	257	392	507	377	47	1	53
	Females	459	243	65	194	271	241	199	262	375	511	360	79	5	21
	Not stated	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
	Total	1,060	523	140	338	484	418	379	519	767	1,018	737	126	6	87
1889....	Males	536	269	90	131	187	186	175	241	381	492	342	43	.....	29
	Females	470	245	88	179	251	226	222	270	398	471	366	75	3	29
	Not stated	8	2	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1
	Total	1,014	516	178	311	439	412	397	511	779	963	708	118	3	59
1890....	Males	609	250	73	143	229	242	220	308	422	576	368	52	.....	59
	Females	524	216	66	156	263	277	242	332	399	513	406	86	5	44
	Not stated	13	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	10
	Total	1,146	468	139	299	492	519	462	640	821	1,090	774	138	5	113
1891....	Males	703	256	86	134	248	206	210	279	438	530	346	52	.....	69
	Females	551	231	90	170	232	208	225	284	395	507	412	97	3	48
	Not stated	10	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
	Total	1,264	489	176	304	480	415	435	563	833	1,037	758	149	3	118
1892....	Males	681	251	79	155	219	226	228	312	502	631	397	40	2	88
	Females	539	251	86	177	287	275	271	349	473	554	467	89	1	61
	Not stated	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
	Total	1,225	502	165	332	506	501	499	661	975	1,185	864	129	6	149

* Excluding still births and premature births.

TABLE No. 8.

*Percentages of Deaths by Ages and Sex to total Mortality, from 1884 to 1892, inclusive.**

YEARS.		Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.
1884	Males	16.00	8.45	2.51	4.73	7.79	5.84	6.26	8.52	11.20	17.46	10.16	1.04	.04
	Females	11.74	7.05	2.99	6.38	8.84	7.31	7.02	7.81	11.17	14.76	12.60	2.33	.....
	Total	13.82	7.73	2.75	5.57	8.33	6.60	6.65	8.16	11.18	16.08	11.41	1.70	.02
1885	Males	14.78	8.00	2.20	3.87	6.75	6.43	6.75	8.96	14.00	16.99	10.09	1.14	.04
	Females	12.07	7.06	2.21	5.34	8.95	7.65	7.35	7.32	11.55	15.07	12.95	2.41	.07
	Total	13.37	7.51	2.21	4.64	7.95	7.07	7.07	8.10	12.72	15.98	11.58	1.80	.05
1886	Males	16.06	9.00	3.10	4.35	6.75	6.20	6.53	7.52	12.13	16.45	10.45	1.39	.07
	Females	12.36	7.10	2.89	5.71	9.37	7.48	6.26	8.09	10.88	14.35	12.74	2.67	.10
	Total	14.18	8.04	2.99	5.04	8.08	6.85	6.39	7.81	11.50	15.39	11.62	2.03	.08
1887	Males	16.20	7.64	2.35	4.69	6.48	6.08	6.15	8.40	12.46	16.92	11.11	1.49	.03
	Females	13.19	7.58	1.94	5.55	8.09	7.01	7.58	7.80	11.35	15.67	11.10	2.95	.19
	Total	14.67	7.61	2.14	5.13	7.30	6.56	6.88	8.09	11.90	16.28	11.10	2.23	.11
1888	Males	18.16	8.65	2.31	4.45	6.58	5.47	5.56	7.94	12.10	15.66	11.64	1.45	.03
	Females	14.06	7.45	1.99	5.94	8.30	7.38	6.10	8.03	11.49	15.66	11.03	2.42	.15
	Total	16.10	8.04	2.15	5.20	7.44	6.43	5.83	7.98	11.80	15.66	11.34	1.94	.09

1889	Males	17.44	8.75	2.93	4.26	6.09	6.05	5.70	7.84	12.40	16.01	11.13	1.40	.....
	Females	14.40	7.51	2.70	5.48	7.69	6.92	6.80	8.27	12.20	14.43	11.21	2.30	.09
	Total	15.88	8.11	2.81	4.89	6.91	6.50	6.27	8.06	12.29	15.20	11.17	1.86	.05
1890	Males	17.44	7.15	2.09	4.09	6.55	6.93	6.30	8.82	12.08	16.49	10.54	1.49	.....
	Females	15.03	6.19	1.89	4.47	7.54	7.94	6.94	9.52	11.45	14.72	11.65	2.46	.14
	Total	16.23	6.67	1.99	4.28	7.04	7.43	6.62	9.17	11.76	15.60	11.09	1.97	.07
1891	Males	20.15	7.34	2.47	3.84	7.11	5.91	6.02	8.00	12.56	15.15	9.92	1.49	.....
	Females	16.18	6.78	2.61	4.99	6.81	6.11	6.61	8.34	11.60	14.88	12.09	2.85	.08
	Total	18.19	7.06	2.55	4.41	6.96	6.01	6.31	8.16	12.08	15.04	10.99	2.16	.04
1892	Males	18.29	6.74	2.12	4.16	5.88	6.07	6.12	8.38	13.48	16.94	10.66	1.07	.05
	Females	14.11	6.56	2.25	4.63	7.51	7.20	7.09	9.13	12.38	14.50	12.22	2.33	.02
	Total	16.17	6.64	2.18	4.39	6.70	6.63	6.60	8.76	12.91	15.69	11.44	1.70	.03

* Excluding those with age and sex not stated, and premature and still births.

Table No. 8 shows the percentages of death, by age periods and sex, to the total mortality from 1884 to 1892, inclusive. Tables 7 and 8 are interesting and instructive inasmuch as they give the number of deaths and the percentage to the total mortality by age periods, for the eight years embraced in the tables.

Table No. 8 presents another graphic view of the slaughter of the innocents. The fearful mortality of early childhood is vividly illustrated in the first two columns of percentages. It is in tables like these that statistics reveal the terrible truth, and without which we would be ignorant of the true facts.

TABLE No. 9.

*Deaths of Children under Five Years of Age, by Seasons, 1892.**

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months	190	123	145	97	122	108	223	261	165	122	83	84
Quarters		458			327			649			289	
Percentages		26.58			18.98			37.66			16.78	
Half-years			785						938			
Percentages			45.56						54.44			
Total deaths					1,723							

* Not including deaths with month not stated, premature and still births.

This table represents the mortality of children under five years of age, by seasons, for the year 1892. The greatest mortality of the year occurred in the quarter embracing the months of July, August, and September, and was 37.66 per cent. of the total mortality among children, as against 26.58 per cent. for the first quarter, 18.98 per cent. for the second, and 16.78 per cent. for the last quarter of the year.

There were 1,727 deaths among children under five years of age during the year, four with month not stated not appearing in table No. 9.

For the year 1891 the percentages were as follows: First quarter, 17.73; second quarter, 18.02; third quarter, 41.72; last quarter, 22.51.

TABLE No. 10.

Total Deaths by Seasons, 1892.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Months.....	1,345	694	648	607	569	469	625	660	558	511	515	481
Quarters.....		2,687			1,645			1,843			1,507	
Percentages..		34.97			21.41			23.99			19.63	
Half-years....			4,332						3,350			
Percentages..			56.38						43.62			
Total deaths..						7,682						

* Not including deaths with month not stated, premature and still births.

Table No. 10 gives the total number of deaths at all ages, by seasons, for the year 1892. There was a total of 7,682 deaths, not including those with month not stated, premature and still births. The greatest mortality was in the month of January, 1,345, and the least in June, 469. The percentages, by quarters, were as follows: First quarter, 34.97; second quarter, 21.41; third quarter, 23.99; last quarter, 19.63.

The percentage for the first half of the year is 56.38; for the last half, 43.62.

The heavy percentage for the first quarter is due to epidemic influenza which prevailed severely during that period.

TABLE No. 11.

Nativity of Persons Deceased for 1892, *by Counties.*

COUNTIES.	Total deaths.*	NATIVE BORN.		FOREIGN BORN.	
		Deaths	Percentages.	Deaths.	Percentages.
Rockingham	1,026	832	89.75	95	10.25
Strafford	864	681	84.39	126	15.61
Belknap	440	329	92.41	27	7.59
Carroll	342	269	95.39	13	4.61
Merrimack	1,064	883	90.29	95	9.71
Hillsborough	2,092	1,468	78.92	392	21.08
Cheshire	608	497	90.36	53	9.64
Sullivan	382	322	89.94	36	10.06
Grafton	749	607	94.11	38	5.89
Coös	421	267	81.90	59	18.10
Total	7,988	6,155	86.82	934	13.18

* Including those whose nativity was not recorded. In the calculations of percentages, the rates are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table No. 11 gives the nativity of the decedents for the year 1892, together with the percentages of each, by counties. The greatest number of foreign-born decedents, as well as the highest rate, was in Hillsborough county, where there is a larger foreign-born population, being 392 or 21.08 per cent. Coös follows with 18.10, Strafford 15.61, Rockingham 10.25, Sullivan 10.06, Cheshire 9.64, Merrimack 9.71, Belknap 7.59, Grafton 5.89, Carroll 4.61.

The total foreign born decedents for the state was 934,

a rate of 13.18. This rate for the previous year was 13.47, and for 1890, 13.55. The uniformity of percentages for the three years given is noticeable.

TABLE No. 12.

Nativity of Persons Deceased from 1884 *to* 1892, *inclusive.*

YEARS.	Total deaths.*	NATIVE BORN.		FOREIGN BORN.	
		Deaths.	Percentages.	Deaths.	Percentages.
1884	6,194	4,868	89.01	601	10.99
1885	6,201	4,847	89.35	578	10.65
1886	6,426	4,989	88.52	647	11.48
1887	6,479	5,131	88.03	698	11.97
1888	6,854	5,449	87.53	776	12.47
1889	6,696	5,383	88.00	734	12.00
1890	7,368	5,672	86.45	889	13.55
1891	7,310	5,637	86.52	878	13.47
1892	7,988	6,155	86.82	934	13.17

*Including those whose nativity was not recorded, In the calculations of percentages, the ratios are not given to the *total* reported deaths, but only to the total of those cases where the nativity was stated.

Table No. 12 shows the number of native and foreign-born decedents in the state for each year from 1884 to 1892, inclusive, with percentages of each.

Of a total of 7,988 deaths in the state returned for the year 1892, 6,155, or 86.82 per cent., were native-born, and 934 or 13.17 per cent., foreign-born.

TABLE No. 13.

Deaths in 1892 *of Persons Aged One Hundred Years, or more.*

NAME.	Date of death.	AGE.			Place of death.	Birthplace.	Single, married, or widowed.
		Years.	Months.	Days.			
Mitchel Rivers	January 20	106	6	.....	Hillsborough	Scotland	Married.
Aaron Nichols	January 27	100	8	21	Bow	Bow	Widowed.
Parkman Brooks	February 12	100	.....	.....	No. Charlestown	.....	Married.
Hugh Rogers	March 4	100	.....	.....	Dover	Ireland	Widowed.
Amy Sawyer	November 26	103	.....	.....	Barrington	Barrington	Widowed.

TABLE No. 14.

Causes of Death, by Classes, from 1884 *to* 1892, *inclusive.*

	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
I.—Zymotic diseases	907	890	1,095	1,073	1,097	1,172	1,155	1,301	1,344
II.—Constitutional diseases	1,276	1,271	1,284	1,222	1,200	1,114	1,309	1,095	1,167
III.—Local diseases	2,594	2,637	2,610	2,731	2,994	2,852	3,146	3,149	3,531
IV.—Developmental diseases	857	848	948	952	1,016	1,041	1,150	1,141	1,057
V.—Violent deaths	201	225	206	218	234	233	271	271	283

There were returned for the year 1892, 7,988 deaths, of which 3,981 were males, 3,990 females, and 17 with sex not stated.

Table No. 14 gives the causes of deaths, by classes, for the years 1884 to 1892, inclusive.

There were attributed to the zymotic diseases 1,344 deaths; constitutional diseases, 1,167; local diseases, 3,531; developmental diseases, 1,057; and to violent deaths, 283. There was a marked increase of deaths in the local diseases over the number reported in 1891.

TABLE No. 15.

Percentage of Causes of Death, by Classes, from 1884 *to* 1892, *inclusive.**

YEARS.	CLASSES.				
	Zymotic.	Constitutional.	Local.	Developmental.	Violent deaths.
1884	15.9	22.4	45.7	12.3	3.5
1885	13.9	22.2	46.0	12.2	3.6
1886	18.2	21.4	43.4	13.4	3.4
1887	17.9	20.4	45.7	12.1	3.6
1888	17.4	19.1	47.6	12.0	3.7
1889	19.1	18.2	46.5	12.3	3.8
1890	17.0	19.3	46.5	13.1	4.0
1891	19.5	16.4	47.2	12.8	4.0
1892	18.9	16.4	49.7	10.8	4.0

* Excluding deaths from unspecified causes, premature and still births.

Table No. 15 gives the percentages of causes of death, by classes, excluding deaths from unspecified causes, premature and still births, from the year 1884 to 1892, inclusive. This table presents substantially the same information as table No. 14, but in the form of percentages. The relative fatality of each class of diseases is vividly shown. The increase of the percentage of deaths from local diseases during the period included in the table as well as the decrease of developmental diseases is especially marked.

TABLE No. 16.

Causes of Death, by Classes and Counties, 1892.

COUNTIES.	Zymotic.		Constitutional.		Local.		Developmental.		Violent.		Unspecified.		Total.
	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	Number.	Percentages.	
Rockingham	152	14.81	187	18.22	446	43.49	132	12.86	42	4.09	67	6.53	1,026
Strafford	152	17.59	131	15.16	375	43.40	118	13.66	32	3.71	56	6.48	864
Belknap	96	21.82	61	13.86	193	43.86	55	12.50	18	4.09	17	3.86	440
Carroll	38	11.11	56	16.34	180	52.63	30	8.77	11	3.21	27	7.89	342
Merrimack	165	15.51	160	15.04	484	45.44	154	14.47	49	4.60	52	4.89	1,064
Hillsborough	368	17.59	282	13.48	830	39.67	297	14.15	59	2.82	256	12.24	2,092
Cheshire	101	16.61	86	14.14	282	46.38	71	11.68	28	4.60	40	6.58	608
Sullivan	69	18.06	48	12.57	210	54.97	38	9.95	4	1.05	13	3.40	382
Grafton	111	14.81	97	12.95	371	49.53	103	13.75	24	3.20	43	5.74	749
Coös	92	21.85	59	14.01	160	38.00	59	14.01	16	3.80	35	8.31	421
Total	1,344	16.83	1,167	14.61	3,531	44.20	1,057	13.23	283	3.54	606	7.59	7,988

Table No. 16 gives the causes of death, by classes and counties, for 1892, with the percentages of each to the total number of deaths, and including deaths from unspecified causes, premature and still births, which accounts for the differences in the percentages in tables 15 and 16; the former gives the percentage of each class to the total number of specified causes, excluding premature and still births, while the latter gives the percentage of each class to the total number of all classes.

The highest percentage in the zymotic class is in Coös county, 21.85; Belknap, 21.82; Sullivan, 18.06; Hillsborough and Strafford, each 17.59; Cheshire, 16.61; Merrimack, 15.51; Rockingham and Grafton, each 14.81; Carroll, 11.11. The percentage of deaths in this class for the entire state is 16.83 to the total mortality, as against 17.79 for 1891.

In the constitutional class the variation of percentages is not so marked, the highest being 18.22 in Rockingham county, followed by 16.34 in Carroll, 15.16 in Strafford, 15.04 in Merrimack, 14.14 in Cheshire, 14.01 in Coös, 13.86 in Belknap, 13.48 in Hillsborough, 12.95 in Grafton, and 12.57 in Sullivan. The percentage for the whole state is 14.61, and for the previous year 17.76.

In the class of local diseases, the rates are as follows: Sullivan, 54.97; Carroll, 52.63; Grafton, 49.53; Cheshire, 46.38; Merrimack, 45.44; Belknap, 43.86: Rockingham, 43.49; Strafford, 43.40; Hillsborough, 39.67; Coös, 38.00. Average for the state in this class, 44.20. In the developmental class the average rate is 13.23, the highest being 14.47 in Merrimack county, and the lowest 8.77 in Carroll county. There were 283 deaths from violent causes, and 606 from unspecified causes.

Table No. 17 shows the mortality from prominent zymotic causes. Cholera infantum heads this list, but it will be noticed that there were 120 deaths less from this cause in 1892, than in the preceding year. Croup, with 45 deaths, shows a lower mortality than for any of the years

included in the table. Diphtheria, with 134 deaths for 1892, is the lowest recorded since 1885. The same is true of dysentery.

Typhoid fever was responsible for 109 deaths, which is considerably less than ever before recorded in New Hampshire in a single year.

Deaths from whooping cough, measles, and scarlet-fever, show an increase over the preceding year.

The total number of deaths from zymotic diseases, 942, is the lowest figure reached since 1885.

TABLE No. 17.

Mortality from Prominent Zymotic Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.												
	Cholera infantum.	Croup.	Diarrhœa.	Diphtheria.	Dysentery.	Erysipelas.	Fever, cerebro-spinal.	Fever, typhoid.*	Measles.	Pertussis.	Scarlatina.	Septicæmia.	Total.
1884.....	266	49	53	110	80	19	25	137	3	14	52	27	835
1885.....	219	74	59	78	40	25	20	136	45	25	53	38	812
1886.....	362	64	38	156	79	18	26	194	18	26	21	27	1,029
1887.....	336	84	38	177	53	20	34	134	39	21	26	30	992
1888.....	370	94	50	103	63	36	34	150	55	23	34	29	1,041
1889.....	353	88	68	210	67	27	25	161	16	47	18	29	1,109
1890.....	399	64	50	164	48	29	....	143	9	26	16	57	1,005
1891.....	486	56	46	160	51	43	....	170	19	27	13	38	1,109
1892.....	366	45	53	134	42	39	19	109	24	37	27	47	942
Average	348	69	51	144	58	28	20	148	25	27	29	36	986

* Including fever, bilious, intermittent, malarial, and typho-malarial fevers.

TABLE No. 18.

Mortality from Principal Constitutional Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.										
	Dropsy.	Anæmia.	Cancer.	Mortification.	Rheumatism.	Scrofula.	Tabes mesenterica.	Phthisis (pulmonary).	Hydrocephalus.	Tubercular meningitis.	Total.
1884	80	43	213	18	26	26	4	865	27	*	1,302
1885	90	32	212	24	28	22	2	857	25	*	1,292
1886	83	28	206	27	47	16	11	809	33	19	1,279
1887	79	17	218	29	47	16	7	766	23	16	1,218
1888	75	34	203	22	43	21	14	742	30	13	1,197
1889	62	40	213	21	43	22	13	651	21	24	1,110
1890	53	28	276	33	30	15	6	825	13	30	1,309
1891	41	41	213	2	24	11	19	695	22	15	1,083
1892	43	35	235	24	25	17	10	736	16	24	1,165
Average	67	33	221	22	35	18	10	772	23	20	1,217

* Not classed separately.

The mortality from the chief constitutional diseases from 1884 to 1892, inclusive, is shown in table No. 18.

The total number of deaths recorded in this class for the year 1892 is 1,165, of which pulmonary tuberculosis is responsible for 736.

The uniformity of the number of deaths from cancer for the past nine years, the period covered by the table, is striking.

TABLE No. 19.

Mortality from Principal Local Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.													
	Apoplexy.	Paralysis.	Convulsions.	Cephalitis.*	Brain disease.	Heart disease.	Bronchitis.	Pneumonia.	Enteritis.	Gastritis.	Peritonitis.	Liver disease.	Bright's disease, nephritis, and other kidney diseases.	Total.
1884	192	248	99	120	134	507	78	436	69	44	61	63	140	2,191
1885	206	278	93	133	122	489	112	504	57	49	44	63	157	2,307
1886	220	249	71	141	127	510	81	466	53	66	48	71	143	2,246
1887	210	253	64	117	121	552	114	556	57	54	48	69	163	2,384
1888	243	273	88	143	112	575	142	628	39	51	63	72	154	2,634
1889	259	196	76	151	126	564	127	582	56	42	57	56	200	2,492
1890	263	251	65	186	140	568	194	703	63	60	51	56	201	2,801
1891	283	241	78	161	130	572	180	673	73	47	68	55	182	2,743
1892	308	209	78	188	140	571	217	890	72	68	94	48	222	3,105
Average	242	244	79	149	128	545	138	604	60	53	59	61	173	2,544

* Meningitis and cerebritis included.

Table No. 19 gives the mortality from the principal local diseases from 1884 to 1892, inclusive. The annual average for the eight years is 2,544, the total for 1892 being 3,105, as against 2,743 in 1891. An almost startling feature of this table is the large increase in the number of deaths from pneumonia, not only over the previous year, but for the entire period represented.

There were 890 deaths from pneumonia, 571 from heart

disease, 308 from apoplexy, 217 from bronchitis, 209 from paralysis, 188 from cephalitis, 222 from Bright's disease, 140 from brain diseases, 94 from peritonitis, 78 from convulsions, 72 from enteritis, 68 from gastritis, 48 from liver disease.

TABLE No. 20.

Mortality from Principal Developmental Diseases from 1884 *to* 1891, *inclusive.*

YEARS.	DISEASES.									
	Still born.	Debility, infantile.	Debility, premature birth.	Malformation.	Teething.	Innutrition.	Childbirth.	Old age.	Atrophy and debility.	Total.
1884	156	*	35	13	19	*	27	457	144	851
1885	145	*	39	13	13	*	31	420	167	828
1886	140	68	54	12	16	50	30	468	98	936
1887	166	56	63	10	20	76	27	449	78	945
1888	189	91	69	19	20	81	20	407	112	1,008
1889	220	79	68	24	18	63	27	426	104	1,029
1890	197	113	65	11	15	95	28	410	204	1,138
1891	213	104	73	18	14	90	23	385	208	1,128
1892	205	101	82	21	11	81	19	441	75	1,036
Average	189	87	61	17	16	77	26	429	132	989

* Classed with atrophy and debility.

Table No. 20 shows the number of decedents from the principal developmental diseases for the nine years given.

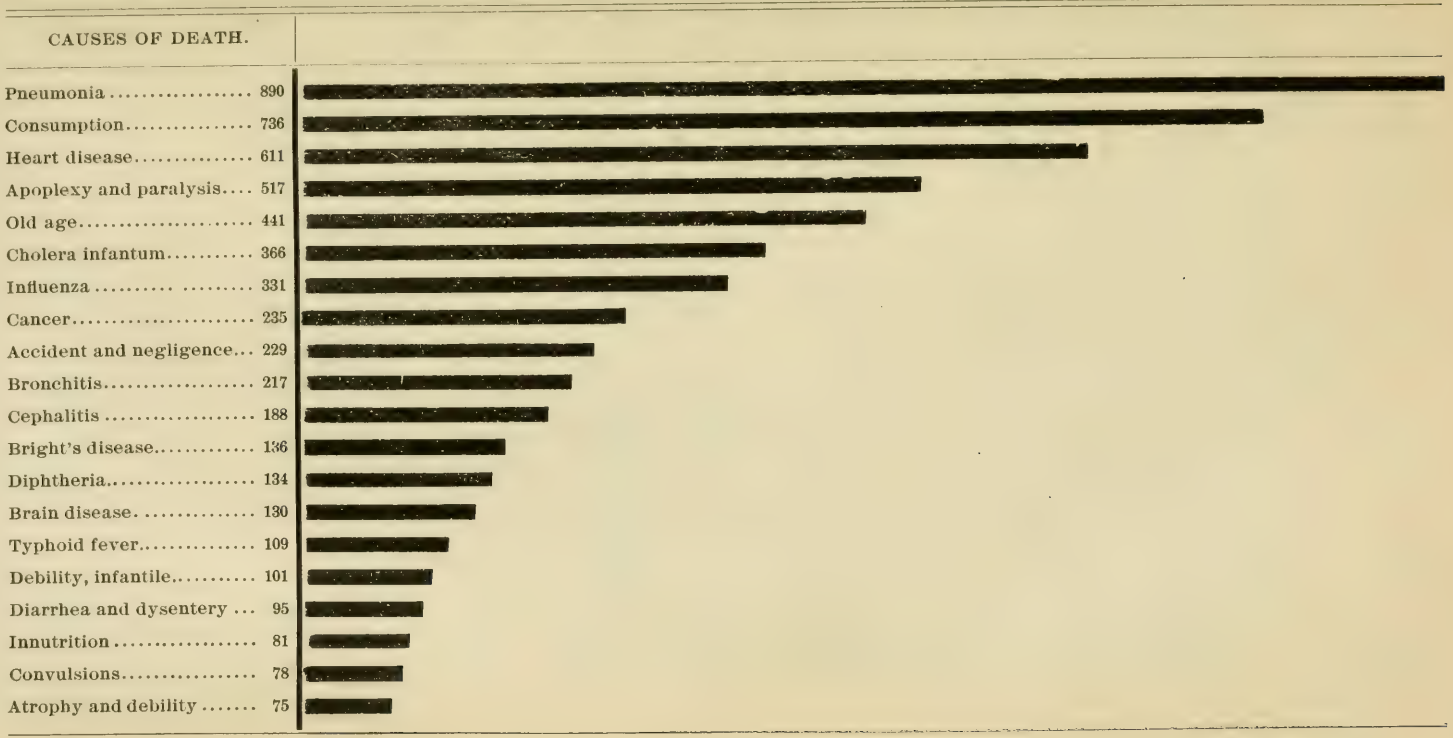
TABLE No. 21.

Mortality from Twenty Prominent Causes from 1884 *to* 1892, *inclusive.*

CAUSES OF DEATH.	Deaths in 1892.	ORDER OF FATALITY.								
		1892	1891	1890	1889	1888	1887	1886	1885	1884
Consumption	736	2	1	1	1	1	1	1	1	1
Pneumonia	890	1	2	2	2	2	3	5	2	5
Heart disease	611	3	3	3	3	3	2	2	4	2
Apoplexy and paralysis	517	4	4	4	4	4	4	3	3	4
Old age	441	5	6	5	5	5	5	4	5	3
Cholera infantum	366	6	5	6	6	6	6	6	6	6
Cancer	235	8	8	7	7	7	7	7	7	7
Diphtheria	134	13	13	12	8	15	9	10	18	13
Accident and negligence	229	9	7	8	9	8	8	9	8	11
Typhoid fever *	109	15	11	13	10	9	10	8	9	10
Cephalitis †	188	11	12	11	11	10	12	11	10	12
Diarrhea and dysentery	95	17	18	17	12	12	14	13	15	9
Bright's disease	136	12	14	16	13	20	15	15	14	14
Bronchitis	217	10	10	10	14	11	13	17	12	17
Brain disease	130	14	16	14	15	13	11	12	11	8
Atrophy and debility	75	20	9	9	16	14	18	14	13	18
Croup	45	21	21	21	17	16	16	21	19	22
Debility, infantile	101	16	17	15	18	17	23	22	‡	....
Convulsions	78	19	20	20	19	18	21	19	16	15
Innutrition	81	18	19	18	20	19	19	23	‡	....
Influenza	331	7	15	19	....	....	....	....	....	....

* Fever, bilious fever, malarial, intermittent, and typho-malarial fevers included. † Meningitis and cerebritis included. ‡ Classed with atrophy and debility.

DIAGRAM NO. 1.—SHOWING THE COMPARATIVE MORTALITY, BY ABSOLUTE NUMBER OF DECEDENTS FROM TWENTY PROMINENT CAUSES OF DEATH DURING YEAR ENDING DECEMBER 31, 1892.



CONSUMPTION (PULMONARY TUBERCULOSIS).

Table No. 21 gives a comparative view of the twenty most prominent causes of death for the past nine years—from 1884 to 1892, inclusive,—diagram No. 1 shows the relative mortality from the same causes for the year 1892. Heretofore in both tables and diagrams, consumption has stood at the head in the magnitude of mortality, but this year it is outstripped by pneumonia. This is not because the former disease has been diminished, but because pneumonia has very largely increased, as will be seen by reference to other tables.

The average number of deaths from pulmonary phthisis for the past nine years is 772, annually, while for the year 1892 it is 736, thirty-six below the average, but forty-one more than was recorded the previous year. It appears from a study of table No. 18, that the disease is being somewhat reduced, although there are too many factors entering into the statistics of this malady to make the conclusion a positive one in so short a period as nine years.

The following table (No. 22) illustrates the comparative mortality of pulmonary phthisis for the period mentioned:

TABLE No. 22.

Mortality from Consumption from 1884 *to* 1892 *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rate per 10,000 living population.
1884	865	14.01	24.18
1885	857	13.82	23.68
1886	809	12.58	22.17
1887	766	11.82	20.82
1888	742	10.82	20.01
1889	651	9.72	17.42
1890	825	11.19	21.91
1891	695	9.51	18.31
1892	736	9.21	19.24

The mortality from consumption, the percentage of the same to the total mortality, and the rate per 10,000 of the population, is shown in the above table, for the years 1884 to 1892, inclusive.

Table No. 23 shows the mortality from this disease, for the same period by counties, with percentages to the total mortality.

For 1892 the rates are as follows: Rockingham 12.96, Carroll 10.53, Strafford 9.72, Merrimack 9.40, Cheshire 9.21, Hillsborough 8.36, Belknap 7.95, Grafton 7.77, Coös 7.60, Sullivan 7.07.

The average for the state is 9.21.

TABLE No. 23.

Mortality from Consumption, by Counties, with Percentages of Deaths to Total Mortality, from 1884 to 1892, inclusive.

COUNTIES.	1884.		1885.		1886.		1887.		1888.		1889.		1890.		1891.		1892.	
	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.	Deaths.	Percentages.
Rockingham	130	14.89	134	14.70	142	14.74	130	14.84	96	10.71	88	10.05	134	12.58	85	8.57	133	12.96
Strafford	105	16.74	96	15.50	96	15.76	80	11.88	93	13.51	75	10.85	117	14.60	94	11.62	84	9.72
Belknap	54	18.94	50	17.30	37	10.22	48	13.00	46	11.73	42	10.79	40	10.69	44	11.23	35	7.95
Carroll	46	13.81	33	12.26	41	13.53	33	11.22	26	7.92	29	9.73	25	8.25	32	9.38	36	10.53
Merrimack	91	12.36	102	12.81	79	9.48	96	11.49	101	10.97	88	9.87	114	11.59	89	9.36	100	9.40
Hillsborough	229	13.83	233	13.69	218	12.96	179	10.55	209	11.32	168	9.64	204	10.33	197	10.06	175	8.36
Cheshire	62	12.47	75	15.18	60	12.63	50	10.37	47	9.63	53	10.09	51	9.15	49	10.16	56	9.21
Sullivan	36	13.18	36	12.67	45	13.72	32	11.30	36	11.00	28	8.91	32	9.63	20	7.15	27	7.07
Grafton	83	12.73	70	11.45	72	11.72	80	13.28	63	9.61	58	9.27	70	10.75	57	8.79	58	7.77
Coös	32	12.16	28	12.33	19	7.42	38	10.32	25	7.96	22	6.32	38	11.51	28	6.10	32	7.60
Total	868	14.01	857	13.82	809	12.58	766	11.82	742	10.82	651	9.72	825	11.19	695	9.51	736	9.21

TABLE No. 24.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Manchester.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	9	9	11	4	9	6	11	7	4	5	12	3				
Quarters	29			19			22			20			91			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	3	4	12	25	24	10	7	5	1							
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	42	44	5
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	..	..	..
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49	..	..	..

Percentage to total mortality of city, 8.77.

Table No. 24 gives the deaths from consumption by months, seasons, ages, and nativity in the city of Manchester for 1892. Total number of deaths from this cause for the year was 91 as against 98 in 1891. Of these 42 were males and 49 females; 42 were American-born, 44 foreign-born, and 5 nativity not stated.

The greatest fatality was in November, 12; July and March, each, 11; January, February, and May, each, 9; August, 7; June, 6; October, 5; December, 3.

Three of the decedents were under 10 years of age; 4 between 10 and 15; 12 between 15 and 20; 25 between 20 and 30; 24 between 30 and 40; 10 between 40 and 50; 7 between 50 and 60; 5 between 60 and 70; 1 between 70 and 80.

TABLE No. 25.

Deaths from Pulmonary Consumption by Seasons, Ages, and Nativity, 1892, for the City of Concord.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	2	2	4	3	1	2	5	3	1	6	4	2				
Quarters	8			6			9			12			35			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	4		2	8	8	6	2	2	3							
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	28	3	4
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	..	..	..
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	..	..	..

Percentage to total mortality of city, 8.43.

Table No. 25 is a record of consumption in the city of Concord for the year 1892. There were 35 deaths from this disease—22 males and 13 females; 28 American-born, 3 foreign-born, and 4 with nativity not stated. The mortality by months was as follows: October, 6; July, 5; March and November, each, 4; April and August, each, 3; January, February, June, and December, each, 2; May and September, each, 1.

Four decedents were under 10 years of age; 2 between 15 and 20; 18 between 20 and 30; 8 between 30 and 40; 6 between 40 and 50; 2 between 50 and 60; 2 between 60 and 70; 3 between 70 and 80.

TABLE No. 26.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Nashua.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	1	1	6		3	2	1	3	1	3	2	3				
Quarters	8			5			5			8			26			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	1		1	12	5	4		1			2					
Nativity	.....			.....			.....			.....			....	13	7	6
Males	.....			.....			...	....		.....			10	..	..	..
Females	.....			.....			.....			.....			16	..	..	..

Percentage to total mortality of city, 6.46.

This table is a record of the same disease in the city of Nashua for the year 1892, the total number being 26—10 males and 16 females; 13 American-born, 7 foreign-born, and 6 not stated.

Six died in March; 3, each, in May, August, October, and December; 2, each, in June and November; 1, each, in January, February, July, and September.

One of the decedents was under 10 years of age; 1 between 15 and 20; 12 between 20 and 30; 5 between 30 and 40; 4 between 40 and 50; 1 over sixty; and 2 age not stated.

TABLE No. 27.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Portsmouth.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	1	3	4	3	2	3	4	2	2	6	2	5				
Quarters	8			8			8			13			37			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
		1	3	15	5	3	3	5		1	1					
Nativity														26	10	1
Males													18	..	..	..
Females													19	..	..	..

Percentage to total mortality of city, 17.62.

The mortality from consumption in the city of Portsmouth for the year 1892 was 37, as against 17 reported the previous year—18 males and 19 females. In October there were 6 deaths; in December, 5; in March and July, 4, each; in February, April, and June, 3, each; in May, August, September, and November, 2, each; in January, 1.

One of the decedents was between 10 and 15 years of age; 3 between 15 and 20 years; 15 between 20 and 30; 5 between 30 and 40; 3 between 40 and 50; 3 between 50 and 60; 5 between 60 and 70, and 1 over 80; 1 age not stated. Twenty-six were American-born, 10 foreign-born, and 1 nativity not stated.

TABLE No. 28.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Dover.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	4	4	5	4	3	1	1	3	3	3	2	4				
Quarters	13			8			7			9			37			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	3	2	3	6	10	5	3	3	1	1						
Nativity														21	12	4
Males													11			
Females													26			

Percentage to total mortality of city, 11.17.

The number of deaths returned from the city of Dover for 1892 was 37, 11 males and 26 females.

Five died in March; 4, each, in January, February, April, and December; 3, each, in May, August, September, and October; 2 in November; 1, each, in June and July.

Three of the decedents were under 10 years of age; 2 between 10 and 15; 3 between 15 and 20; 6 between 20 and 30; 10 between 30 and 40; 5 between 40 and 50; 3 between 50 and 60; 3 between 60 and 70; 1 between 70 and 80, and 1 over 80.

TABLE No. 29.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Keene.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	3	2	2	2	3	1	2	2	1	1						
Quarters	7			6			5			1			19			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	2		3	1	7	1	1	2	2							
Nativity														19		
Males													10			
Females													9			

Percentage to total mortality of city, 13.77.

The city of Keene returned 19 deaths from consumption for the year 1892—10 males and 9 females. Three, each, died in January and May; 2, each, in February, March, April, July, and August; 1, each, in June, September, and October.

Two decedents were under 10 years of age; 3 between 15 and 20; 1 between 20 and 30; 7 between 30 and 40; 1 between 40 and 50; 1 between 50 and 60; 2 between 60 and 70; 2 between 70 and 80.

All the decedents were American-born.

TABLE No. 30.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Rochester.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	1			2	2	4	1	1			1	1				
Quarters	1			8			2			2			13			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
				4	4	4			1							
Nativity														10	1	2
Males													6			
Females													7			

Percentage to total mortality of city, 9.70.

Thirteen deaths from consumption were reported from the city of Rochester in 1892—6 males and 7 females.

Four died in June; 2, each, in April and May; 1, each, in February, July, August, November, and December.

Four decedents were between 20 and 30 years of age; 4 between 30 and 40; 4 between 40 and 50; 1 between 70 and 80.

Ten were American-born, 1 foreign, and 2 nativity not stated.

TABLE No. 31.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Laconia.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
	2	3		1		1		1	1	1						
Quarters	5			2			2			1			10			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
		2		2	2		1	2	1							
Nativity														6	2	2
Males													4			
Females													6			

Percentage to total mortality of city, 7.75.

Laconia returned 10 deaths from consumption in 1892—4 males and 6 females. Three died in February; 2 in January; 1, each, in April, June, August, September, and October.

Two were between 10 and 15 years of age; 2 between 20 and 30; 2 between 30 and 40; 1 between 50 and 60; 2 between 60 and 70; 1 between 70 and 80.

Six of the decedents were Americans, 2 foreign-born, and 2 nativity not stated.

TABLE No. 32.

Deaths from Pulmonary Consumption, by Seasons, Ages, and Nativity, 1892, for the City of Somersworth.

Months	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	American.	Foreign.	Not stated.
			2	2	1	1	3	1		1	3	2				
Quarters		2			4			4			6		16			
Ages	Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.					
	1	2	2	2	3	1	3	1		1						
Nativity	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	11	3	2
Males	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4			
Females	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12			

Percentage to total mortality of city, 11.68.

Sixteen deaths from consumption were reported from Somersworth in 1892—4 males and 12 females.

There were three deaths, each, in July and November; 2, each, in March, April, and December; 1, each, in May, June, August, and October.

One decedent was under 10 years of age; 2 between 10 and 15; 2 between 15 and 20; 2 between 20 and 30; 3 between 30 and 40; 1 between 40 and 50; 3 between 50 and 60; 1 between 60 and 70, and one over eighty.

Eleven were American-born, 3 foreign-born, and 2 nativity not stated.

TABLE No. 33.

Percentage of Deaths from Consumption to the Total Mortality of the Cities of the State, for the years 1883 *to* 1892, *inclusive.*

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Manchester...	14.89	14.28	13.03	15.01	11.15	12.37	9.30	10.29	10.40	8.77
Concord.....	11.41	8.66	10.68	8.60	10.13	10.23	9.81	9.13	9.30	8.43
Nashua.....	16.96	13.72	14.86	10.49	9.73	8.20	8.64	10.69	10.29	6.47
Dover.....	20.97	16.60	16.17	21.17	14.57	12.01	10.31	16.40	12.01	11.18
Portsmouth..	16.02	14.74	12.18	17.84	16.26	13.26	7.73	14.34	8.17	17.61
Keene.....	16.91	16.00	22.80	16.00	11.90	9.47	9.62	10.25	11.90	13.77
Rochester....	.....	.....	.....	.....	.....	.....	.....	.....	11.80	9.70
Laconia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7.75
Somersworth.	.....	.....	.....	.....	.....	.....	.....	.....	.....	11.68

Table No. 33 gives a comparative view of the percentages of deaths from consumption in the several cities of the state for the periods stated.

Table 34 gives the mortality from this disease for 1892, by counties, ages, and sex.

Table No. 35 gives the mortality from consumption for the year 1892, by counties, months, and sex.

TABLE No. 34.

Deaths from Consumption, by Ages and Sex, by Counties, for 1892.

COUNTIES.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Grand total.
Rockingham	Males	....	....	....	1	3	16	10	7	10	9	5	3	1	65	.....
	Females	....	1	....	2	5	26	13	8	2	9	1	....	1	68	133
Strafford	Males	....	3	....	....	....	5	7	5	5	3	2	....	....	30	.....
	Females	1	1	....	4	7	12	12	6	3	2	2	4	....	54	84
Belknap	Males	....	....	....	....	....	2	3	....	3	1	2	1	....	12	.....
	Females	....	....	1	3	1	6	3	2	3	3	....	1	....	23	35
Carroll	Males	1	....	....	....	1	3	3	2	2	1	1	....	2	16	.....
	Females	1	....	....	2	1	3	3	3	2	3	1	1	....	20	36
Merrimack	Males	3	....	1	1	5	9	11	7	2	3	3	1	1	47	.....
	Females	1	....	....	....	7	13	10	6	10	2	3	....	1	53	100
Hillsborough	Males	....	3	....	....	6	23	16	9	8	7	2	3	1	78	.....
	Females	3	1	....	5	13	26	25	12	3	4	4	....	1	97	175
Cheshire	Males	....	....	....	....	2	4	5	1	4	6	5	....	....	27	.....
	Females	1	1	....	....	4	4	8	3	....	4	4	....	....	29	56

TABLE No. 34.—*Continued.*

Deaths from Consumption, by Ages and Sex, by Counties, for 1892.

COUNTIES.	SEX.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Not stated.	Total.	Grand total.
Sullivan	Males	....	....	....	1	1	.....	1	2	2	1	....	1	....	9	.....
	Females	1	....	....	1	1	6	1	2	2	1	1	2	....	18	27
Grafton	Males	....	....	....	1	3	5	3	3	2	5	2	1	....	25	.....
	Females	....	....	....	1	5	10	8	3	1	3	1	1	....	33	58
Coös	Males	....	....	....	....	1	.....	3	....	1	1	....	....	....	6	.....
	Females	2	2	....	....	....	5	5	3	2	3	2	1	1	26	32
Total for State		14	12	2	22	66	178	150	84	67	71	41	20	9	736	736

TABLE No. 35.

Deaths from Consumption by Months and Sex, by Counties, for 1892.

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Rockingham	Males	7	9	1	4	5	2	5	2	9	6	5	10	....	65	.....
	Females	3	7	8	4	7	6	10	5	3	7	5	3	....	68	133
Strafford	Males	2	4	5	3	1	2	4	1	....	3	2	3	....	30	.....
	Females	2	4	3	7	8	4	4	5	3	4	4	6	....	54	84
Belknap	Males	4	2	....	....	1	....	2	1	....	....	1	1	....	12	.....
	Females	3	5	2	1	2	4	1	....	1	3	....	1	....	23	35
Carroll	Males	2	2	1	1	3	1	3	1	1	....	....	1	....	16	.....
	Females	1	1	1	4	1	2	3	3	....	2	1	1	....	20	36
Merrimack	Males	1	4	4	5	2	2	6	3	4	8	6	2	....	47	.....
	Females	6	2	7	4	4	2	6	8	5	3	6	....	....	53	100
Hillsborough	Males	8	4	12	6	8	6	9	4	6	3	8	3	1	78	.....
	Females	8	8	11	3	9	7	9	8	6	8	14	6	....	97	175
Cheshire	Males	2	4	4	3	3	3	3	....	2	1	2	....	...	27	....
	Females	3	6	2	2	3	....	....	4	3	1	5	....	...	29	56
Sullivan	Males	1	1	....	2	....	....	....	2	...	2	....	1	....	9	.....
	Females	3	....	....	3	1	2	....	2	3	1	2	1	....	18	27

TABLE NO. 35—*Continued.*

Deaths from Consumption, by Months and Sex, by Counties, for 1892.

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.	Total.	Grand total.
Grafton	Males	2	2	5	4	....	3	....	1	2	2	1	3	1	26	.....
	Females	5	1	3	1	4	1	8	2	1	3	3	....	....	32	58
Coös	Males	1	....	....	1	....	....	....	1	....	1	1	1	....	6	.....
	Females	3	3	1	...	2	3	3	4	4	2	....	....	1	26	32
Total for state		67	69	70	58	64	50	76	57	53	60	66	43	3	736	736

TABLE No. 36.

Deaths from Consumption, by Nativity, Civil Condition, and Sex, by Counties, for 1892.

BOUNTIES.	SEX.	American.	Foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	Total.	Grand total.
Rockingham	Males	47	10	8	30	23	11	1	65	....
	Females	53	10	5	31	26	5	6	68	133
Strafford	Males	28	1	1	14	13	3	....	30	....
	Females	33	13	8	24	17	11	2	54	84
Belknap	Males	9	2	1	3	3	3	3	12	....
	Females	19	1	3	9	9	5	....	23	35
Carroll	Males	14	....	2	10	6	....	....	16	....
	Females	16	1	3	8	6*	1	5	20	36
Merrimack	Males	37	5	5	26	18	3	....	47	....
	Females	40	8	5	31	14	5	3	53	100
Hillsborough	Males	44	26	8	26	29	3	20	78	....
	Females	46	33	18	33	32	7	25	97	175
Cheshire	Males	23	3	1	15	8	4	....	27	....
	Females	24	3	2	14	11	4	....	29	56
Sullivan	Males	8	1	....	7	2	....	....	9	....
	Females	16	2	....	7	7	2	2	18	27
Grafton	Males	21	....	4	14	9	2	....	25	....
	Females	18	11	4	18	11	4	....	33	58
Coös	Males	5	1	....	1	1	4	....	6	....
	Females	14	4	8	11	8	3	4	26	32
Total for state		515	135	86	332	253	80	71	736	736

* One divorced.

Table No. 36 gives the nativity, civil condition, and sex of decedents, by counties, for 1892.

Out of a total of 736 deaths from this disease, 515 were American-born, 135 foreign-born, and 86 nativity not stated; 332 were married, 253 single, 80 widowed, and 71 condition not stated.

PNEUMONIA.

TABLE No. 37.

Mortality from Pneumonia, by Counties, from 1884 to 1892, inclusive.

COUNTIES.	YEARS.									Average.
	1884	1885	1886	1887	1888	1889	1890	1891	1892	
Rockingham....	45	63	77	70	83	68	90	77	96	74
Strafford.....	39	48	37	46	52	38	80	73	96	56
Belknap.....	18	24	25	44	50	37	42	28	55	39
Carroll.....	30	27	15	33	46	49	37	42	50	36
Merrimack.....	50	72	60	85	73	86	94	73	137	81
Hillsborough...	110	128	112	128	129	131	158	185	175	139
Cheshire.....	36	52	39	55	55	52	44	54	86	53
Sullivan.....	21	22	23	22	30	31	32	31	62	30
Grafton.....	66	48	54	52	77	64	74	53	84	63
Coös.....	21	20	24	21	33	26	52	57	49	34
Total.....	436	504	466	556	628	582	703	673	890	605

Table No. 37 gives the mortality from pneumonia, by counties, from 1884 to 1892, inclusive, with averages for that period. The total number of deaths from this disease in 1892 was 890—217 more than was returned the previous year, and 285 greater than the average for the past nine years. For the first time in our registration reports pneumonia has reached the first place among the causes of mortality. The increase in the number of deaths from this disease is doubtless due to epidemic influenza, as the increased death-rate from pneumonia occurred largely in those months registering the highest mortality from influenza.

TABLE No. 38.

Mortality from Pneumonia from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	51	48	3	3	6	27	23	30	36	50	97	54	8	436
1885	69	49	8	4	11	15	27	32	37	72	105	74	1	504
1886	57	38	13	6	13	17	24	29	49	68	92	53	7	466
1887	68	33	7	5	13	28	32	40	48	89	121	68	4	556
1888	67	45	6	10	19	40	49	51	62	67	123	81	8	628
1889	61	50	8	12	17	29	36	40	48	98	100	79	4	582
1890	73	48	9	10	11	35	46	45	79	106	127	107	7	703
1891	73	43	15	6	11	43	31	38	74	109	126	95	9	673
1892	77	49	13	6	12	41	61	60	95	147	190	128	11	890

The mortality from pneumonia, by ages, from 1884 to 1892, inclusive, is given in the above table. It will be seen that the greatest number of deaths was in persons from 70 to 80 years of age. This disease is exceedingly fatal among the aged, as a comparison of these figures with the number of persons living in the different age periods will show.

TABLE No. 39.

Mortality from Pneumonia, by Months and Quarters, from 1884 *to* 1892, *inclusive.*

YEARS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Not stated.
1884	55	55	51	52	32	13	14	11	5	28	51	67	2
1885	53	59	101	95	35	25	13	10	10	33	38	32	...
1886	32	44	73	51	51	33	22	18	18	24	46	54	...
1887	71	73	85	85	49	17	13	13	14	34	47	54	1
1888	72	95	75	73	76	24	16	23	21	43	36	72	2
1889	69	66	79	102	51	22	15	19	16	53	41	49	...
1890	213	74	69	43	47	35	18	9	23	23	69	79	1
1891	73	60	82	72	95	41	13	7	14	23	37	152	4
1892	384	110	83	86	57	21	5	11	19	21	34	54	5
Total	1,022	636	698	659	493	231	129	121	140	282	399	613	
Quarters	2,356			1,383			390			1,294			

Table No. 39 shows the mortality from pneumonia, from 1884 to 1892, inclusive. For 1892 the greatest number of deaths occurred in January, the large mortality of that month being a continuation of the almost epidemic prevalence of the disease which gave an excessive mortality in December of 1891. The smallest number of deaths was in August.

BRAIN DISEASES.

TABLE No. 40.

Mortality from Brain Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.						
	Cephalitis. *	Apoplexy.	Paralysis.	Insanity	Convulsions.	Brain diseases.	Total.
1884	120	192	248	22	99	134	815
1885	133	206	278	27	93	122	859
1886	141	220	249	24	71	127	832
1887	117	210	253	25	64	121	790
1888	143	243	273	37	88	112	896
1889	151	259	196	35	76	126	843
1890	186	263	251	28	65	140	933
1891	161	283	241	44	78	130	917
1892	173	308	209	33	78	140	941
Average	147	242	244	30	79	128	869

* Meningitis and Cerebritis included.

Table No. 40 shows the number of deaths from brain diseases for the past nine years. While the variation in the total from year to year is not great, there seems to be a small increase during the past three years.

DIARRHEAL DISEASES.

TABLE No. 41.

Mortality from Diarrheal Diseases from 1884 *to* 1892, *inclusive.*

YEARS.	DISEASES.					Total of diarrheal diseases.
	Cholera infantum.	Cholera morbus.	Diarrhea.	Dysentery.	Enteritis.	
1884	266	21	52	80	69	488
1885	219	20	40	40	57	376
1886	362	14	38	79	53	546
1887	336	16	38	53	57	500
1888	370	8	50	63	39	530
1889	353	12	68	67	56	556
1890	399	12	.....	50	63	524
1891	486	16	46	51	73	672
1892	366	17	53	42	72	550
Average	351	15	43	58	60	527

This table exhibits the mortality from diarrheal diseases for the past nine years. Cholera infantum, which is responsible for a large proportion of the deaths recorded in this table, shows a large falling off from the previous year.

CHOLERA INFANTUM.

TABLE No. 42.

Mortality from Cholera Infantum from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Percentage of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	266	4.29	7.41
1885	219	3.53	6.05
1886	362	5.63	9.92
1887	336	5.18	9.13
1888	370	5.39	9.98
1889	353	5.27	9.44
1890	399	5.41	10.59
1891	486	6.64	12.08
1892	366	4.58	9.57
Average	351	5.10	9.35

Deaths from cholera infantum for the past nine years are shown in this table; also percentages to all deaths and to the population.

TABLE No. 43.

Mortality from Cholera Infantum, by Ages, from 1884 *to* 1892 *inclusive.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	214	48	..	..	..	..	1	..	1	..	..	..	2	266
1885	186	33	..	..	..	..	..	..	..	..	..	..	..	219
1886	283	77	2	..	..	..	..	..	..	..	..	..	..	362
1887	284	51	..	..	..	..	..	..	..	..	..	..	1	336
1888	298	70	..	..	..	..	..	..	..	..	..	..	2	370
1889	297	54	1	..	..	..	..	..	..	..	..	..	1	353
1890	343	52	4	..	..	..	..	..	..	..	..	..	..	399
1891	409	74	3	..	..	..	..	..	..	..	..	..	..	486
1892	320	41	4	1	..	..	..	..	..	..	..	..	..	366

This table shows that cholera infantum is emphatically a disease of early childhood.

TABLE No. 44.

Cholera Infantum, by Cities.

CITIES.	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
Manchester	131	112	88	122	148	117	86	146	122	102
Dover	7	10	15	15	13	19	5	12	25	18
Nashua	15	14	13	30	20	39	43	56	55	36
Portsmouth	4	3	9	6	4	9	9	8	11	6
Concord	9	12	5	7	8	11	13	8	25	20
Keene	9	6	2	7	5	2	8	5	5	4
Rochester	....	....	....	....	....	....	....	....	8	5
Laconia	....	....	....	....	....	....	....	....	....	7
Somersworth	....	....	....	....	....	....	....	....	....	11
Total for cities	175	157	132	187	198	197	164	235	251	209
Total for state	278	268	219	362	336	370	353	399	486	366

Table No. 44 shows the mortality from cholera infantum by cities for the past nine years.

Manchester gives much the largest mortality, not only numerically, but in proportion to the population.

TABLE No. 45.

Mortality from Diphtheria from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	8	39	34	17	4	2	.	1	3	..	..	1	1	110
1885	10	32	22	5	3	4	..	1	1	..	..	..	..	78
1886	9	53	58	22	7	3	1	1	2	..	..	..	..	156
1887	7	74	51	20	6	9	4	2	1	1	1	..	1	177
1888	6	43	36	7	4	2	1	1	2	1	..	..	..	103
1889	7	86	68	18	13	10	3	3	..	1	..	..	1	210
1890	6	64	45	26	10	3	4	3	..	..	..	1	2	164
1891	5	74	48	17	7	2	4	..	..	1	..	..	2	160
1892	9	54	37	14	5	6	2	2	..	2	.	..	3	134

Table No. 45 shows the mortality from diphtheria by age periods from 1884 to 1892, inclusive. It will be seen by this table that the mortality from this disease has been growing less since 1889.

CROUP.

TABLE No. 46.

Mortality from Croup from 1884 *to* 1892, *inclusive, by Ages.*

YEARS.	Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	Over 80.	Unknown.	Total.
1884	8	35	6	..	..	..	..	..	..	..	..	..	..	49
1885	20	41	9	..	..	1	2	..	1	..	..	..	..	74
1886	13	40	10	1	..	..	..	..	..	..	..	..	..	64
1887	26	48	7	2	..	..	..	..	..	..	1	..	..	84
1888	16	67	9	..	..	..	1	..	..	..	1	..	..	94
1889	11	65	11	1	..	..	..	..	..	..	..	..	..	88
1890	16	41	6	1	..	..	..	..	..	..	..	..	..	64
1891	11	32	10	2	..	..	..	..	..	..	..	..	1	56
1892	6	32	5	1	1	..	..	..	..	..	..	..	..	45

The mortality from croup for the past nine years is shown in the above table.

TABLE No. 47.

Mortality from Croup and Diphtheria from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.			Percentages of deaths to deaths from all causes.			Death-rates per 10,000 living.		
	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.	Croup.	Diphtheria.	Total.
1884	49	110	159	.79	1.77	2.56	1.36	3.06	4.42
1885	74	78	152	1.19	1.25	2.44	2.04	2.15	4.19
1886	64	156	220	.99	2.41	3.40	1.75	4.27	6.02
1887	84	177	261	1.29	2.73	4.02	2.28	4.81	7.09
1888	94	103	197	1.37	1.50	2.87	2.53	2.77	5.30
1889	88	210	298	1.31	3.13	4.44	2.35	5.61	7.96
1890	64	164	228	.86	2.21	3.08	1.69	4.32	6.02
1891	56	160	216	.79	2.20	2.10	1.48	4.22	5.69
1892	45	134	179	.56	1.69	2.25	1.18	3.50	4.68
Total	618	1292	1910	.....	.....	.....	.....	.....	.....
Average	69	142	212	1.02	2.10	3.12	1.85	3.85	5.70

The mortality from diphtheria and croup for the past nine years is shown in the above table.

From a sanitary stand-point the two diseases are considered identical.

TYPHOID FEVER.

TABLE No. 48.

Mortality from Typhoid Fever from 1884 *to* 1892, *inclusive.*.

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living (estimated population).
1884	137	2.21	3.81
1885	136	2.19	3.75
1886	194	3.01	5.31
1887	134	2.06	3.64
1888	150	2.18	4.04
1889	161	2.40	4.30
1890	143	1.94	3.79
1891	170	2.42	4.48
1892	109	1.36	2.85
Total	1,334	.. ..	....
Average	148	2.20	4.00

The above table shows the mortality from typhoid fever from 1884 to 1892, inclusive.

It will be seen that the mortality from this disease has been reduced to lower figures for 1892 than ever before reported.

SCARLET-FEVER.

TABLE No. 49.

Mortality from Scarlatina from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living population.*
1884	52	.83	1.44
1885	53	.85	1.46
1886	21	.32	.57
1887	26	.40	.70
1888	34	.49	.91
1889	18	.26	.48
1890	16	.21	.42
1891	13	.18	.34
1892	27	.33	.71
Total	260	.....	.....
Average	29	.43	.78

* Population estimated for all but census years.

Table No. 49 exhibits the number of deaths returned from scarlet-fever for the past nine years.

There was an increase in the mortality of this disease in 1892 over that of the three previous years.

MEASLES.

TABLE No. 50.

Mortality from Measles from 1884 *to* 1892, *inclusive.*

YEARS.	Deaths.	Percentages of deaths to deaths from all causes.	Death-rates per 10,000 living population.*
1884	3	.04	.08
1885	45	.72	1.24
1886	18	.28	.49
1887	39	.60	1.06
1888	55	.80	1.48
1889	16	.23	.42
1890	9	.12	.23
1891	19	.26	.50
1892	24	.30	.62
Total	228	.....	.....
Average	25	.37	.68

* Population estimated for all but census years.

This table shows the number of deaths returned from measles since 1884.

MILK AS A VEHICLE OF INFECTION.

BY J. J. BERRY, M. D., MEMBER OF THE STATE BOARD OF HEALTH, PORTSMOUTH, N. H.

While the attention of the public has often been called to the dangers and disadvantages of adulterated milk, very little account has been made of the important rôle which it plays as a medium for the transmission of disease. The food of infancy and childhood should be above suspicion, yet few outside of the medical profession, realize the many dangers to which the little ones are daily exposed by the consumption of milk. Indeed, when we consider the source, the preparation, the manner of transportation, and the methods of administering this food, it is surprising that the deaths are not more marked and more disastrous. Nevertheless, the record is bad enough, for the sanitary history of the past ten years is replete with fatalities and epidemics, produced and propagated by the substance in question.

Milk possesses several elements of danger. The indirect effects of adulteration have been often considered. It is an undoubted fact that many children among the poorer classes of our cities, die every year of starvation. This insufficient nutriment, which, as found in the tenement-house, is hardly deserving the name of milk, utterly fails to preserve vitality, and the infant promptly acquires disease and as readily succumbs to the same. The quality of the milk may be impaired, not only by adulteration, but by disease or improper feeding of the herd from which it is derived, for, though it may contain no specific germ or poison,

there is often found such a variation in its normal constituents, as to render it decidedly unwholesome. The relation between milk supply and infant mortality has been shown by Girard in a paper read before the French Society of Public Medicine. The examination by competent inspectors of all milk supplied by dairymen to the people of Paris, has resulted in a wonderful improvement in its quality, and since 1881, the infant mortality has decreased from 22.5 per thousand to 17 per thousand.

As the result of his investigations in New Orleans, Prof. Metz, in his report for 1892, showed that the city by its new system of milk inspection, would save from 500 to 1,000 children, annually. During the year 1883, New York city under milk inspection, diminished the infant mortality 3,673, over the previous year, when there was no inspection. Dr. Egbert found that during the year 1891, 5,488 children under 1 year, died from cholera infantum and various wasting diseases, and that most of them had been fed on cow's milk, which had been found to have been in various stages of fermentation. Such a record is indeed a reproach upon our latter day civilization, and a melancholy commentary upon the sanitary status of our country as well.

The tendency of milk under perfectly normal conditions, to absorb and retain various bacteria, was commented upon by Prof. Sedgwick in a paper read in 1891, before the Society of Arts. He showed that milk drawn from a clean, well kept Holstein cow, and received into a sterilized bottle, yielded on an average 530 bacteria per cubic centimetre. When little care was used to exclude dust from the cow or stable, an average of 30,500 per cubic centimetre was found. In 57 samples of city milk examined in 1890, he discovered an average of 2,355,500, while in samples collected from various grocery stores, the number was very much larger. He holds that the two conditions favoring such an abundance of bacteria are uncleanliness, which furnishes the conditions for decomposition, and staleness, which affords the

necessary time for the development of these organisms. The chief danger to communities, however, is afforded by the presence of various specific germs in the milk consumed. The opportunities for such infection are many and varied. This fluid absorbs from the surrounding atmosphere, not only many volatile substances, but likewise the floating particles of dust and germs of disease, which may be present. More than this, it is an excellent culture fluid, and, once contaminated, bacteria increase and multiply in it with great rapidity. The diseases which are most often transmitted in this way are scarlet-fever, diphtheria, typhoid fever, and tubercular disease, though nearly all affections possessing infectious properties may be propagated in the same manner. The history of various epidemics bears out the truth of these statements. In a report by the editor of the *British Medical Journal*, it is shown that up to 1881, there had occurred in Europe, as the result of infected milk, seventy-one epidemics, consisting of nearly 5,000 cases. Since that time many similar outbreaks have existed, both here and in Europe, which have added to the above cases two or three thousand more. Moreover, it is certain that a great many have occurred which were never traced to their proper source and reported.

Diphtheria may be propagated, not only by infected milk, but by the diseased animal. Cole of Australia reported in 1882 an epidemic of this disease traceable to the milk of a cow suffering from a diphtheritic affection, and which closely resembled the cases previously noted by Power of England. Additional proof of the identity of the two diseases is afforded, by Prof. Damman of Germany, whose assistants contracted typical forms of diphtheria while treating a number of calves suffering from sore throats. A much more common mode of infection, however, is by milk which has become contaminated by the germs of the disease. The virulence, tenacious character, and great vitality of the latter, render them peculiarly dangerous

and difficult to guard against. Hence a substance like milk, when carried into an infected atmosphere, or placed in receptacles which have been touched by a person suffering from diphtheria in any of its forms or stages, becomes at once a most dangerous article of food, and may prove to be the source of a wide-spread epidemic. An outbreak which appeared last summer in Hightstown, N. J., consisting of 28 cases with 11 deaths, is a striking illustration of the facts quoted. The *Medical News*, in reporting the investigations of the state board of health, says,—

"Further investigation disclosed the fact that a German boy who washed cans and did the milking at the dairy in question, called on a local physician, who found the boy's throat covered with the membranous patches. He pronounced the case diphtheria. The boy had been ailing for several days, and it is supposed that while at work he contaminated the milk, and that in this congenial soil the germs rapidly multiplied and infected the entire supply. An additional fact that strengthens the theory is that of the only two other cases known out of the village, one was the daughter of the dairyman and the other his niece, a neighbor.

"A striking feature of the case is that the sick boy, who is supposed to have caused the epidemic, was not seriously sick at any time. When the doctor examined him his tonsils were covered with pseudo-membrane, but it soon disappeared after a little treatment, and he was not confined to his bed at all. It, therefore, appears that this most malignant epidemic originated in a case of 'walking diphtheria.'"

A recent epidemic occuring in this city proved itself very similar to the above, both as to causation and results. An employé on a milk farm in the suburbs, who washed all the cans, delivered milk, and exercised a general supervision of affairs, contracted diphtheria, and after performing the above duties for a while, finally took to his bed, and

subsequently died. A day or two afterward, the same disease appeared in the city, and along the line of his milk route—the cases being limited, with probably one or two exceptions, to his own customers or those using the milk. A careful inspection of the farm and its live-stock, failed to discover any cause for the outbreak, other than that above indicated. After quarantine and other preventive measures had been instituted, there was an immediate abatement of the disease.

The germ of scarlet-fever has many of the characteristics possessed by that of diphtheria, and infects milk perhaps with greater frequency than the latter. The inspections of the local government board in Newcastle, England, showed the presence of infectious disease in the houses of 53 dairymen, including 17 invaded by typhoid fever, 3 by continued fever, 24 by scarlet-fever, 4 by small-pox, 3 by measles, and 2 by diphtheria. From these dairies there had been a spread of small-pox in one instance, typhoid-fever in one instance, and scarlet-fever in three instances. Here, as in other diseases, the infection is produced either by a diseased cow, by contamination of the milk by atmospheric germs or those cohering to various receptacles, or by the water used for washing the latter. The source first mentioned is discredited by many sanitarians, though several prominent British observers have described a disease of cows which was similar to scarlet-fever, both as regards the character of symptoms, and the appearance of the germs. By far the most frequent source of danger, however, lies in the absorption by the milk of the minute organisms which are thrown off by such patients, and which permeate the atmosphere of the dwelling and adhere to everything in its immediate vicinity. The vitality of these particles is so great, that even after a fairly thorough disinfection, and the lapse of a considerable period of time, they suddenly, under proper stimulus, become again active and reproduce the disease.

Tuberculosis or consumption, which is such a prominent

factor in the death-rate of our race, becomes in the same way a source of danger. The extreme frequency of this disease among cattle, is a fact which is almost daily commented upon by the newspaper press of this country. Many of our states are by legislative act fairly well protected against the disease, but very many communities are imperfectly, if indeed at all, surrounded by the necessary safeguards. The consequence is, that many are, no doubt, consuming milk day after day which contains the germs of consumption, and will eventually produce their direful consequences. While it is estimated that from one half to one per cent. of all cows are tuberculous, the disease exists with far greater frequency in cattle which are stall-fed, or kept under bad hygienic surroundings,—one observer having found it present in a town in France in 30 per cent. of such cattle.

The experiments of Heim of the German Imperial Health Department have established the following facts:

1. That milk containing the bacilli may produce the disease.

2. That the bacilli may live in decomposing substances three days,—in milk, ten days or more.

In butter, they were active four weeks. In whey and cheese they were able to produce the disease at the end of two weeks, while they remained visible for 32 days.

That milk from such sources is practically infectious, has been many times demonstrated. Ollivier, in *Le Samaine Medicale*, states that in a certain school for girls, there occurred in 3 months 11 cases of tuberculosis, mostly of the intestinal variety, with 5 deaths. Two of these fatalities were cases in which there could have been absolutely no hereditary tendencies to consumption. It was afterwards found that the milk supply was from a cow suffering from general tuberculosis. Many similar cases might be quoted to illustrate the method by which infection often occurs, and in support of the theory that very many cases of intes-

tinal consumption in children originate from diseased milk. It is moreover true, that the latter is not dependent upon any peculiar type of the disease, for the milk of cows affected with tuberculosis in any part of the body is, as a rule, infectious.

The use of this fluid is, of course, attended with far greater danger than the use of meat, as the germs which the latter may contain, are often destroyed in the process of cooking, whereas, milk is rarely subjected to a degree of heat sufficient to exterminate the organisms which are present.

While typhoid-fever is not one of the diseases transmitted by animals, large epidemics have originated from the use of milk, containing the specific germ of the disease. This bacillus has been shown by Heim to have a much greater power of resistance in milk than in water. In non-sterilized milk which had become acid, they were still visible after 21 and 35 days, but could not be found at the end of 48 days. In butter their vitality lasted 3 weeks, but in whey and cheese, only 3 days. Hart of London reports 50 epidemics, comprising nearly 3,500 cases of typhoid—all due to milk infection. Numerous outbreaks embracing from 10 to 30 cases have been reported in this country from time to time, which were credited to the same cause. In the vast majority of instances, the true origin of infection was found in the water-supply by which the milk was contaminated, or, more commonly, by the washing of cans and other receptacles with water which had received its germs by drainage from the contents of vaults and cess-pools into wells, springs, or streams. Thus Ballard, in describing a large epidemic near Leeds, states that all the early cases, with one exception, had been supplied with milk from the same dairy, which had been mixed with water obtained from a pump on the premises which was fed from the overflow of a vault escaping into the soil. The presence of such wells, or other sources of water-supply

which are so situated as to receive surface drainage, are a constant menace to the public health, especially as regards typhoid fever and analogous diseases.

The scope of this article will not permit the discussion of the subject in all its branches. We have hitherto considered those diseases produced by the direct influence of germs. There are, however, other affections and very serious ones, which have their origin in similar sources. By their action upon various articles of food, bacteria generate highly poisonous substances, whose properties are now quite well understood. They have been found to exist not only in milk, but in cheese, butter, ice-cream, and the like, and have produced in those using the same, violent intestinal inflammation, and sometimes death. While the specific cause of this fermentation above described, has not yet been determined, it is undoubtedly due to the action of some of the germs found in such numbers in impure milk, and which are noxious only under certain conditions.

From a consideration of the above fact, it will be readily admitted that the opportunities for the infection of milk are abundant, if not always appreciable. They are;—the milking of the animal by those who often come with unwashed hands from the bed-side of a person sick with some contagious disease; the transportation of milk in cans which have been washed with polluted water, which may possibly have been used also for the adulteration of the above, and its distribution either by convalescents, or those in some way infected by these diseases; add to these, the dangers arising from the various affections of the animals themselves, and we have a number of sources which should strike one with apprehension, and lead to the exercise of the greatest care and watchfulness.

As regards preventive measures, the first point to be considered, is the quality of the milk. This is, of course, dependent upon the feed supplied to the cow or herd. It is important that it be of good quality, and large in

amount. The use of partly fermented foods, or those from which a large part of the nutriment material has been abstracted, should not be allowed. Particular attention should be devoted to the stables in which the cattle are confined for a considerable portion of the year. They should be large, well ventilated, and well kept. The results of the neglect of these precautions have been noted elsewhere. All other measures for maintaining their healthy condition should be carefully and assiduously practised, as their effect upon the milk supply is prompt and well marked. During the process of milking, every precaution should be taken to exclude particles of dust and other material from the fluid. Persons engaged in the care and milking of cows should be of cleanly habits, and no one in whose household a case of infectious disease exists should perform any of these duties, or should be in any way employed in the preparation or distribution of the milk.

All pails, cans, and other like utensils should be made absolutely clean, either by steam or boiling water, after each use of the same. The milk should be gradually cooled after being drawn, and maintained at a low temperature, until delivered to the consumer. The dairy should be a well lighted and ventilated apartment, free from all odors, and otherwise acceptable from a sanitary standpoint. It should be furnished with a pure and abundant water-supply, and should be used for no other purpose than that for which it was designed.

Under the present conditions, it is evident that in many instances, few, if any, of these precautions are carried out. An inspection of many small milk farms in the vicinity of our cities and large towns will quickly convince one of the criminal carelessness which is manifested in these particulars. In the large cities, the results are most plainly evident, especially during the summer months. The milk which has been subjected to all these sources of contami-

nation, is collected by dealers, in small portions, from perhaps twenty farms, and after a long journey in wagons and cars finally arrives at its destination, where it is again subjected to similar treatment before it reaches the consumer. Such milk under the very best conditions is scarcely a suitable food for children. What must it be at other times?

In relation to these facts, Professor Sedgwick says,—"We may as well ask ourselves, whether, in the place of private care and watchfulness, we have provided any efficient or adequate inspection of the stables from which the milk supply comes, or any even approximately adequate supervision of it after its arrival. There is at present, so far as I am aware, no systematic inspection, whatsoever, of the farms, stables, or herds from which public milk supplies come. After its arrival in the city, inspectors protect us, more or less effectually, from its adulteration with water. The dwellers in the cities take such milk as it comes, asking no questions. They have surrendered their primitive safeguards, and have placed none in their stead. By the present system of inspection, we are protected from fraud, but not from filth or disease." This is particularly true in the state of New Hampshire, where the various laws bearing upon this matter are seldom, if ever, enforced.

It is unfortunate that the milk supply of our cities, is derived from so many different sources, and that it cannot be obtained exclusively from large dairy farms, which are under constant sanitary supervision in all their departments. Under present conditions, proper inspection is almost an impossibility, and we are forced to rely upon the honesty and intelligence of the individual. The consumer has no means of determining the quality of the milk, except by sight and taste, and, in case of doubt, is obliged to rely upon sterilization by steaming or boiling, in order to render it potable. The avoidance of infected milk is, however, more important than the treatment of that which has already suffered

contamination. The enactment of sanitary laws will accomplish much, yet the source of our milk supply can never be above suspicion until the business of production and sale is conducted by large dairies under the care of reliable and intelligent persons, and subject to frequent inspection by state or government boards.

A DISSERTATION

ON THE

TRANSPORTATION OF PERSONS ILL WITH CONTAGIOUS OR INFECTIOUS DISEASE.[1]

BY G. P. CONN, M. D., CONCORD.

That railroads and steamships, in their capacity of common carriers, may and do become disseminators of infectious and contagious diseases, can be assumed without any fear of the assertion being controverted.

It is a well known fact, that small-pox came into Montreal in 1885 amid all the luxurious appointments of our justly celebrated Pullman service,—that yellow-fever came into Grenada and Memphis, as well as other towns, in 1878, riding in all kinds of coaches,—that steamship lines every year bring to our shores more or less that are suffering from typhus fever or other contagious diseases, and that experience has proved that all forms of transportation may and do become the avenues by which disease finds its way from place to place.

It is an equally safe assertion, that there is no one connected with the management of our railroads but will disclaim any intention of their lines being used to spread disease, and at the same time, they would gladly welcome any reliable information that would enable their lines to formulate rules and regulations that would overcome the

[1]Read at annual meeting of railway surgeons of New York at Academy of Medicine, Nov. 15, 1893, and published in the *Times and Register*, Philadelphia, Dec. 2, 1893.

difficulties that now surround the problem of sanitation as applied to railway transportation.

The public, since the epidemic of yellow-fever in 1878–'79, have become critical and easily alarmed upon questions bearing directly, or indirectly, upon the health of individuals, families, or communities, and therefore state boards of health, as well as municipal health officers, oftentimes feel called upon to exercise authority at different points, much to the discomfiture of the management and patrons of great through lines of travel.

If we had a central or national board of health, that could act in conjunction with the interstate commerce commission, it is possible something might be done to give to the public and the management of roads some uniform method by which all might be governed; but as we have nothing of the kind, it is quite time that associations like this and our national association of railway surgeons were discussing this subject, for we may at any time, in our association with railways and their management, be brought face to face with an epidemic travelling across our country with the devastating power of a cyclone.

To show that I am not the only one who holds this belief, I will instance the following: So long ago as 1884, W. Thornton Parker, surgeon U. S. A., then stationed in New Mexico, in a paper read before the American Public Health Association, entered an emphatic protest against allowing people ill with contagious and infectious diseases to occupy cars in which the public were expected to travel. To quote from his paper, he said—"Not only are the ordinary cars thus constantly contaminated, but the more luxurious and expensive sleeping cars are very much used for cases suffering with whooping cough, scarlatina, and other diseases. Patients convalescing from contagious diseases are very commonly met with. I understand that quite recently a very prominent and educated lady travelled from San Francisco to Boston, and even beyond, with children

sick with the whooping cough. In this case, a private compartment was used; but of course the danger of infecting other children was only lessened, not removed. Several cases of that most dreaded of all diseases of children, scarlet-fever, have to my knowledge been communicated in this way. A healthy child occupies the same seat where a convalescing scarlet-fever patient has been sitting, and falls a victim to this terrible disease. Such license is an outrage on the traveling public, and should not be tolerated another day."

Such was the language of an acute observer nearly ten years since, and while state and local boards of health have made great advancement in most matters connected with sanitation, the conditions remains the same in our railway cars. I am not certain but the conditions are worse, for I believe that with the opening of new avenues for travel, far more people are passing over our roads in the pursuit of health than was thought possible ten years since.

At that time Dr. Parker suggested that railway station officials, conductors, and others connected with the train department, be required to prohibit persons suffering from contagious diseases from occupying cars used by the general travelling public. Surely a commendable suggestion, but I fear impractical, as these men could not be expected to diagnose diseases. He added that a hospital sleeper could be furnished on through lines, and a medical inspector for large stations like those of New York, Chicago, St. Louis, and other large places, and said these inspectors should have the legal authority to force patients suffering from contagious diseases or convalescing from infectious disorders into these special cars. To-day this would not be considered practical, for small-pox and diphtheria, scarlet-fever, and measles would not be considered fit subjects to be placed in the same car.

As another instance, allow me to quote from the address of Medical Director Albert L. Gihon, U. S. N. In the

course of his address to the sections "on hygiene, climatology, and demography" of the Pan-American congress, on the occasion of its recent meeting in Washington, Dr. Gihon used the following impressive language: "The consumptive, whose traits no professional acumen is required to recognize, frequents our crowded thoroughfares, sits beside us in unventilated street cars, and at the hotel table, occupies Pullman sleeping berths, and shares the steamship state-room, wholly unrestrained and innocently ignorant that he or she may be sowing the seeds of disease among delicate women and children. Any one may verify this who uses his eyes for the purpose along the railway and coastwise steamer routes to our invalid resorts. Within a twelvemonth, on my way to Mexico by rail, I was a fellow-passenger with two invalids in the advanced stage of phthisis, en route for San Antonio, one of whom occupied the opposite berth, and the other one diagonally across the car, so that I could see and hear them coughing and expectorating, with only such attention as well intending but unskilled relatives could render. They had no vessels for receiving their sputa, which was discharged in their pocket handkerchiefs, to be scattered over pillows, coverlets, and blankets. They left the car in the morning, and I saw those same berths,—it is true, with change of linen sheets and pillow-cases but with no change of blankets, mattresses, or pillows,—occupied that very night by other travellers, who were thus subjected to contact with a pathogenic microbe far more tenacious of life and power of evil-doing, than the dreaded cholera spirillum. One has only to sit in a crowded street car on a winter-day and watch the clouds of respiratory steam circling from the mouths and nostrils of the unclean and diseased into the mouths and nostrils of the clean and healthy, as the expiratory effort of the one corresponds with the inspiratory act of the other.

"The road is short but straight and sure, from vomica and mucous patch to the receptive nidus in another's body.

Who that has ever had forced upon him an aerial feast of cabbage, onions, garlic, alcohol, tobacco, and the gastric effluvia of an old debauché, can doubt that aqueous vapor can transport microscopic germs by the same route? Not long ago, I travelled by sea from New York to Charleston, and for two nights was cabined with some twenty consumptives going to Florida. The air was chill, and they huddled around the stoves, and fearfully and fearlessly closed doors and windows, until the atmosphere became stifling with their emanations and the dried sputa, which they ejected on every side. It was comparatively easy to escape during the day by staying on deck, and I slept with my stateroom windows wide open, but the curtains, carpets, pillows, and mattresses had been saturated by I know not how many expectorating predecessors. I have visited fifty small-pox patients a day, have gone through yellow-fever wards and stood by cholera bedsides with far less apprehension than I experienced on that trip, yet it was one taken by many thousands of people, who would have been terrified to know that a case of cholera was within a mile to leeward of their homes."

Now let us for a moment digress and suppose that the conditions Dr. Gihon has so graphically described, and which almost any one having had occasion to make long journeys over our trunk lines of railroads can duplicate over and over again—suppose that instead of diseased men, women, and children, there were to be found Texas steers, glandered horses from New York, or diseased animals from any part of our country: would such diseased animals be allowed to travel in close proximity with other cattle? Certainly not; but if any one disbelieves this assertion, let him start from Texas or Wyoming with a car-load of diseased animals with the intention of finding a market for them in New England. He will not get far before he will find he is the centre of a cyclone, and will be expected to run a bureau of information. It will be exceptional if he can travel

twenty-four hours before every cattle commission and board of agriculture in the United States will be informed of the dangerous character of his herd, and protests against his being allowed to go from state to state will reach him from all directions. The transportation companies will also be notified that they are transgressing the law in opening an avenue by which contagious and infectious disease may be spread among other herds of cattle that are now in a healthy condition. Boards of cattle commissioners all along the expected route will assume unusual activity; telegrams will be sent over the wires at lightning speed; distinguished experts in veterinary medicine and surgery will be consulted; the federal power at Washington, as represented by a distinguished member of the president's cabinet, will be appraised of the dangers to be apprehended, and appealed to by those who have good reason to believe the transportation of diseased cattle through the country is liable to become a menace to the material interest of a large class of our citizens; and all these efforts proving unavailing, the strong arm of the law is invoked, not only to prevent the transportation of diseased animals, but the transportation companies have been made the defendants in suits brought to recover damages.[1]

There can be no doubt but it is a simple act of justice to our agricultural friends to meet such an emergency promptly and intelligently; and I believe I have as much sympathy for the welfare of the lower animals as any one, would be glad to insure them at all times the kindest and treatment and the best of care in all their conditions, yet I must admit that, under similar circumstances, I should like to see the same spirit prevail in regard to the human race, so that where epidemic influences are abroad we could

[1]While this paper was in preparation, the writer saw in the daily press a statement to the effect that a large cattle owner in one of our western states had commenced a suit for damages against a railway running through his ranch, on the ground that the road had been guilty of transporting diseased cattle, and as a consequence, his herd had become affected.

appeal to the strong arm of the law, and call to our aid expert knowledge with the same facility that can be done for the brute creation.

Dr. C. W. P. Brock, in his address as president of the National Association of Railway Surgeons, at its meeting in Omaha, refers to this in the following eloquent language. He said.—

"Human beings, born to immortality, are entitled to as much protection as the dumb beast; but it is not accorded to them by laws governing the transportation of the country.

"The government has established a bureau of animal industry to prevent the exportation of diseased cattle and to provide means for the suppression and to prevent the dessemination of contagious and infectious diseases among domestic animals, and makes an annual appropriation for the support of the bureau and assigns a cabinet officer to the head of it. This officer can stop the shipment of domestic animals from any section of the country he may see fit, and issue specific direction how the cars, pens, etc., shall be disinfected. Now this is as it should be, and shows wonderful foresight and care on the part of our great government in protecting the pockets of her citizens from loss by the disease and death of their domestic animals. But how is it when you come to human beings? Why, absolutely no protection is afforded to them. If there was a money value attached to each individual that would make him equal in value to one of these domestic animals, congress might be moved to the enactment of laws for the protection of those who are but 'little lower than the angels, and created in the image of God himself.'"

"Man's inhumanity to man makes countless millions mourn."

At this point we may naturally inquire whether, as surgeons to important railway interests, we have any duties regarding railway sanitation. It is true that in some sec-

tions of our country railway directors and managers seem to regard us as a necessary evil,—like a fire extinguisher, only to be used in case of fire, our services only to be called for in case of accident, and only paying for such service, they very soon only think of us as in some way connected with misfortune. In this they are very much like other people, for the majority of the public do not, as a rule, think it necessary to consult us except that misfortune overtakes themselves or some member of their family. Yet in this there has been a marked improvement during the last decade, for the public are becoming more and more alive to the necessities of personal hygiene as well as public sanitation.

In this way public sentiment in matters pertaining to sanitation is fostered and developed until state and municipal authorities are warranted in making and maintaining wholesome rules and regulations governing the hygienic conditions of individuals and communities.

Such being the fact, we may confidently expect that the management of our railroads will find it for their advantage to take more advanced ground, and, instead of following the wake of public sentiment, take a new position, and either establish a department of hygiene in connection with surgery, or arrive at the same conclusions by some other means that will suit them better. It must in some way take cognizance of the sanitary condition of its cars, grounds, depots, and warehouses, as well as of those accidentally injured along the line. It is quite certain that the patron of the road who is enabled to make a journey across the continent without suffering the discomforts arising from the lack of an intelligent care of the heating and ventilating of coaches, and who can arrive at his destination in good, sound, healthy, vigorous, condition, ready for business as soon as the train comes to a full stop, will never forget that line, nor fail to draw congratulatory conclusions regarding the management whose intelligent care has been the means of rendering such results possible.

That those connected with the train service should be required to do this work is not questioned; but until such employés are properly educated in the work, and have some knowledge of the elementary principles of hygiene and sanitation, it will be useless to expect anything like a system in car cleaning and train service that will prove satisfactory. This assertion need not frighten any one, for the first principles of hygiene and sanitation are in no wise complex, neither do they present a problem that cannot be solved by a little forethought and a comprehensive and common-sense view of the situation.

To say that a coach or a house should be kept clean in every part and place is a very common-place observation, and still it involves one of the first principles in sanitation. It ought not to be a very severe task to instill into the mind of the car cleaner this principle, nor to make the average brakeman understand that he will be held responsible that his car is clean, and for the best use of such devices for heating and ventilation as may be found about the train; yet his attention must be called to such facts, and there must be some one who will call him to account whenever untidy and unwholesome conditions are to be found.

This last proposition involves a professional understanding of the principles of hygiene, as well as the practical application of sanitation, which being progressive, a liberal amount of time must be spent by some one connected with the operating department every year, in order to keep abreast with the investigations that are constantly being prosecuted by scientists and to apply this knowledge to the advancement of a given line in the same manner as other methods and appliances are used to promote the efficiency and the business of a road or a system of roads, whether it be freight or passenger traffic.

That the first principles of sanitation, especially of ventilation, are violated in all forms of cars, is a truth that all travellers will admit.

The ordinary coach, the tourist car, and the Pullman or Wagner are open to criticism. Sometimes I think the Pullman or Wagner to be the most faulty, in the fact that they are fitted up with so much of upholstery, and therefore require so much more skilled labor to keep them clean.

That I am not alone in my estimation of the sanitary condition of so called palace cars, I will quote the language of Julia W. Carpenter, M. D., of Cincinnati, in a paper read before the state medical society of Ohio, who, after speaking of the unhealthful conditions often existing in street cars, remarked,—"Look at the latest luxury, so called, in cars—the vestibule train, all closed up, so the whole train is like one long car. . . . In the ordinary car there is now and then a puff of fresh air from the door, now it is a puff from the next car no fresher than your own. . . . What is this atmosphere in which one is shut up for twenty-four hours? . . . Was there ever a car filled with only healthy people? The breath from the healthiest is refuse material, and to this is added the breath from some that have catarrh, dyspepsia, imperfect teeth, incipient phthisis, and the breath from various other invalids travelling for health. . . . Some smoke is also mixed with this, as the smoking-room being small, the door is usually open. . . . Opening one's own window cannot destroy this mixture, and inhaling it twenty-four hours puts one's vitality at least as low as that of the sparrow at the end of the first hour and resistance to the germs inhaled cannot be expected."

This may seem to be overdrawn, but it is nevertheless true that while one may live for a considerable period in an atmosphere that is badly vitiated with the products of respiration, yet it is also true that it is done at a great risk of having future ill health. An eminent physiologist very accurately says,—"It is a wonderful fact that the body, after a time, adapts itself to such vitiated air, and that one can soon breathe, without apparent inconvenience,

an atmosphere which, when one first entered it, felt intolerable. Such an adaptation, however, can only take place at the expense of a depression of all the vital functions, which must be injurious if long continued or often repeated."

Such words as these from those who are eminently qualified to give an opinion upon hygienic problems are worthy of the attention of car companies and master car builders, for while cars may not always be of the latest type of elegance, still there is no excuse for uncleanliness, as there are always stopping-places where trains remain long enough to allow sweeping and dusting, provided there is some one to see that it is done.

The magic word "Pullman" fades away at once when the passenger realizes that the coach is unclean and unventilated, and a boudoir car having filthy closets destroys the prospective comfort of a journey just as much as though it were a nuisance in any other place.

At present trainmen give little or no attention to the atmospheric conditions that obtain in a car, and when one asks a brakeman if he cannot ventilate a car, he opens either all the transoms or the doors, and then goes into another car to get out of the way or to tell some other trainman of the crank he has in his coach. It will not occur to such a person to go to your assistance when the occupant of a seat in front, clothed in furs sufficient to ride in the open air for miles at a temperature below zero, insists on keeping a window open. You may say this has nothing to do with the construction of a car, and that the operating, and not the construction, department is remiss in its duties when such conditions are found to obtain. This is at once admitted, and still it must be a source of humiliation to the car builder to know, that after so much time has been spent in perfecting a coach it fails to be appreciated by the travelling public, as would the builder of a fine musical instrument suffer from mortification to hear the comments of the

public upon the merits of one of the best instruments because of the want of knowledge of the amateur performer.

How often when riding upon trains do we overhear the passengers commenting among themselves upon the unsanitary conditions surrounding them. And unfortunately for the good name of the road, the criticisms are directly or indirectly aimed at the management,—directly, because these people are suffering from the discomforts of an untidy apartment and unwholesome atmosphere, and indirectly, because the average trainman seems to be utterly unconscious and oblivious of the fact that he has any duties to perform that would improve the situation.

I have seen coaches so filthy that some one should have had the power to substitute a clean, well-ventilated car for the unclean one. How coaches should be made clean is a problem of no small proportions, as we have shown that only a limited time can be allowed, and, therefore, to do good work, modern conveniences and mechanical ingenuity must be substituted in part for the manual labor now employed. Hot water and steam are our best disinfectants, deodorizers, and filth destroyers. It is also a well known fact that surfaces superheated by dry or moist heat become dried and free from the odors of moist surfaces very much sooner than the same surfaces would if wet with cold water, which in cold weather is of great importance, as a car reeking with moisture incident to a washing in cold weather is about as uncomfortable and unhealthy an apartment as can be found.

Whether it will be necessary to bring all coaches that require cleansing within a reasonable distance of a stationary engine in order to utilize steam from its boiler, I will leave to the practical railroad man ; yet I will venture the suggestion that the same result might be attained by attaching a hose to any locomotive near at hand, and which was not to be sent out for an hour or two. To carry a jet of steam into a urinal for a few moments dissolves all the salts de-

posited upon its surface, and the introduction of steam under twenty-five or fifty pounds pressure in the corners and crevices of a closet for a moment, will destroy the most virulent germ that is lurking there. How it shall be brought about is only a question to be settled by practical mechanics.

With the introduction of steam heat, it would seem as if it would not require a very complicated piece of work to be able to connect pipe or hose in such a manner as to effect this at once. In our best cars, the steam heat makes the water-closets more liable to be odorous in winter than in the summer, and attention should be directed to this fact.

I believe it is only a question of practical mechanics, which master car builders or master mechanics should solve, to use compressed air in the thorough cleaning of the upholstered parts of a car. Theoretically, it would seem to be an easy task to make use of the same apparatus that is now used in testing the air brakes. If this could be done, many of the dangers of contagion would be reduced to the minimum.

How invalids shall be transported across the continent, will soon become a serious question, for the number of people travelling about the country in search of some place where a possible new lease of life may be found, is constantly increasing, and therefore, the problem of how they may be allowed full liberty and not endanger the lives of others, is becoming one which scientists and practical mechanics must eventually solve.

Domestic animals, although their owner may be quite willing to pay a fare, are generally consigned to the baggage car, and this without regard to whether they are in health or diseased; yet it will not do to send a passenger to the same compartment, and especially one that is seriously ill. Therefore, on great through lines, the transportation of invalids is liable to become a serious question to the general manager. The invalid seeking a change of climate

in his search of health, will naturally resent the imputation that his presence is a menace to the health and lives of others; while those who believe themselves to be in good health, will object to being associated for long-distance travel with those suffering from tuberculous and other infectious disease. Sooner or later, it is quite probable that on through routes to Florida, Colorado, New Mexico, California, and other places, a hospital car will become part of the train service, the number of trips per month to be regulated by the demand. Such cars should be constructed under the direction of our most expert sanitarians, should have all the important improvements in heating, ventilation, and appliances for the comfort of invalids and their attendants; but all luxurious appointments, such as curtains, carpets, and plush coverings, should be reduced to the minimum, and every part of the coach and its fixtures should be so arranged that it could be cleaned and completely disinfected at any station, or, if need be, the same could be thoroughly accomplished while en route.

Other things being equal, a car of the boudoir pattern, somewhat modified, would probably meet the wants of that class of travellers better than almost any other of our present style of coaches, as curtains and other things that would become soiled and unwholesome, could be reduced to a minimum or left out altogether, in the furnishing of the car.

I am not a practical mechanic, and, therefore, feel a diffidence in making suggestions which require the approbation of a master mechanic, but it would seem to the professional mind, that with our present means of heating with steam direct from the engine, it should be very easy to arrange for the complete disinfection by steam, and that it might be done very expeditiously. This is a matter in which the expert sanitarian and the practical mechanic must meet on mutual ground, and agree upon some method that will be effectual and secure the

confidence of the public; and at the same time, it must be simple and comparatively inexpensive, else it will not receive attention from the trainmen and others, to whom it would have to be intrusted. I should have some doubt of such a coach being at once self-supporting, much less of its ability to pay a dividend on the amount invested, yet it is quite possible that in advertising the trunk line over which it was intended to run at regular intervals, it might prove as profitable as any other means of bringing the route into favor with the public. To do this, it must be constructed on such mechanical and hygienic principles, as to commend itself to every one having occasion to investigate its use; and the possibility of its being thoroughly cleaned and disinfected must be obvious and recognizable by all classes of people, else distrust, instead of confidence will be engendered, and, therefore, it would fail of accomplishing the grand work for which it was intended.

This paper has been somewhat discursive in its character, but if I have succeeded in impressing upon the members of this association that there is a need of discussing this question, as well as the fact that in the solution of the problem, the invalid, those in good health, and the stockholders and management of the roads, are all deeply interested in bringing about a much needed reform, the object of its being written will have been accomplished.

THE WATER-SUPPLY OF ANTRIM.

BY EX-GOVERNOR D. H. GOODELL.

DEAR SIR: The question of furnishing to this village a general water-supply from some large and pure source, has been under consideration here for several years. Many projects have been considered, but until last year, nothing except the appointment of committees for consideration of the subject had been really done. Last March a committee was appointed with instructions to carefully investigate matters, and see where such water could be obtained and ascertain as nearly as possible the expense. Finally at a meeting a month or two later of the South Antrim village fire precinct, organized under the laws of the state, it was voted to instruct the commissioners to proceed to an establishment of a system of water-works, sufficient to supply the village for domestic purposes, and also fire hydrants, so as to protect the property in case of fire. We employed Prof. Angell to examine the waters about the place, and finally after he had analyzed the water of two of our natural ponds, he decided that the water in the Campbell pond, about three and one half miles north of the village, was of most excellent quality. This pond is located on the side of a mountain, some twenty acres or so in area, and is a long way from anything that can now, and will ever be likely to, vitiate it.

A contract was finally made with Messrs. Edw. Gustine & Son of Keene, to establish this system. The question came up, as to whether we should use cast iron or wood for our conduit, but finally it was decided that as there was no difference in the cost we would use a wood-pipe,—First, that we might be able to conduct the water in perfect condition, there being no lead used in the joints in

the pipe, or anything else that would taint the water except the pine wood logs of which the pipe was made; and, second, because in the judgment of the commission these pipes properly put in would be likely to be more durable than cast iron, and far less liable to freeze or to conduct lightning to the injury of the pipe. We, therefore, decided to use wood.

The Messrs. Gustine commenced their work about the first of August and carried it on with great energy and success, and had it completed about the middle of October. We have a pressure of about 100 lbs., and even more in some parts of the village, while at all parts of the village, or nearly all, there is a pressure of at least 80 lbs. to the square inch. We have hydrants placed within 400 feet of every building in the village, and on the main street they are much nearer to each other most of the way. I think we are as thoroughly protected against fire with this system as we can possibly be. Probably if frost is ever liable to trouble our system, it would have done it already this winter, for after it has stood a year, the earth about the pipe will be a better protection than it can be at present, and yet up to this time I have heard of no trouble from any quarter in this respect.

Doubtless we have as fine a system of water-works for a village of our size, as can be found in the country.

One mile of the pipe commencing at the pond, is eight inches in diameter, inside measurement; and the balance of it is six inches in diameter through the main street of our village; and another branch of six inches is extended to another part of the village, which is likely to be built up with new houses within a few years; four-inch pipes branch out to the small streets, and everything is in most perfect working order.

For convenience, for fire purposes, and for the healthfulness of the village, we think no other system anywhere can be superior to this. Cost, $23,000.

IMPURITIES IN ICE.

BY T. MITCHELL PRUDDEN.

A good many of the bacteria which are found in all natural surface waters are expelled or killed when the water freezes, but as many as ten per cent. and often more may remain alive. A large number of studies on this subject have shown that the bubbly and snowy ice is apt to contain many more bacteria than the clear ice does. These bacteria in ice have, as a rule, no influence whatsoever upon the health of the ice consumer, if the ice has been formed on bodies of water which are clear and pure. But ice which is formed on sewage-polluted or otherwise filthy water may contain disease-producing bacteria, and hence be very dangerous for domestic use.

It has thus come to be firmly established as a primary principle in sanitary science, that sewage-polluted water should not be used for domestic purposes, either in its natural state or in its condition as ice. No water which is unfit to drink as water is fit to use for a similar purpose as ice. Its coldness may benumb the sense of taste, so that no warning of its nature comes to the consumer. Its intrinsic clearness and beauty may put him off his guard, but all ice cut from sewage-polluted waters is dangerous, and should by law be kept from the domestic market.

Ice manufactured from distilled water should, it would seem, be germ free. In fact, however, it is extremely difficult to prepare absolutely germ-free water on the large scale, and almost impossible to keep it so if once prepared, because every exposure to the air, or contact with utensils

in common use, brings to it varying and often large numbers of germs which can live and grow in the water. But these small numbers of common bacteria are not of the slightest importance to the salubrity of the water.

Every one should understand that of all the myriads of bacteria about us in earth and air and water, the great majority are harmless. With very few exceptions, the bacteria which can do us harm are those, and those alone, which come from the bodies of men and animals afflicted with disease. So far as water is concerned—and the same applies to ice—it is only sewage pollution or stagnant filth which we have to fear and shun. Good, pure, uncontaminated water, and ice made from such water either by nature or by man, are entirely wholesome, and they are not made more wholesome by distillation or other purifying procedure—they are not more wholesome when germ free.

In point of fact, most of the artificial ice which the writer has examined—and there have been many and abundant samples from various sources collected, and for a period of many months—do contain bacteria in varying numbers. The preliminary distillation, if carefully done, destroys any disease-producing germ forms which might be present in the water used. But a certain number of the more hardy harmless forms may be carried bodily with the steam into the condensers.

In most of the ice manufactories the distilled water is filtered through charcoal before it is run into the freezing cans, for the purpose of removing certain organic compounds which have come into the process of distillation. But these charcoal beds afford breeding places for such germs as may have escaped the ordeal of the heat. The writer has repeatedly found that, while the distilled water, before passing on to the filter beds, was very nearly germ free, the number was increased a thousandfold on leaving them.

So far as the salubrity of the natural as compared with

the artificial ice is concerned, we may rest assured, that, as regards bacteria, one is just as wholesome as the other, provided the water used is pure. If the water is impure from sewage or other unwholesome thing, then the natural ice is never fit for domestic use. If water is impure, the processes of artificial ice making, if carefully performed, are capable of furnishing even from it a product which is harmless and wholesome, whether it be absolutely germ free or not; for absolute freedom from germs—if these are not disease-producing forms—is neither necessary nor especially desirable. It is not bacteria, but disease-producing bacteria, which make of practical significance the invisible flora of either water or ice.

Innumerable analyses have shown that water does not purge itself wholly in the act of freezing, as was formerly believed, from disease germs which may have come into it with human waste. This has been specifically and repeatedly shown to be true for that most dreaded and fatal sewage germ, the bacillus of typhoid fever.

The process of oxidation and sedimentation, which aforetime was demonstrated by most exact chemical analysis to be capable of freeing water in lakes and running streams from organic compounds abundant in sewage, is still urged by belated scientists and frantic tradesmen here and there, in justification of the use of ice cut on sewage-polluted waters.

Sedimentation does remove many harmful germs from sewage-polluted waters. Dilution does diminish the chances to incur disease for every consumer. Many individuals are, at favored times, practically invulnerable to the incursions of these tiny foes. But, after all, it is safe to say that in thickly inhabited regions sewage-polluted water is not fit for men to drink without purification, no matter how fast and far the river runs, or how wide the lake into which the sewage drains. With the size of the lake and volume of the river, the chances of harm decrease, of course, but they

remain chances where none need to be. As our country becomes more thickly settled and our cities larger, the problems involved in pure water and ice supplies are becoming more and more urgent and difficult.

The manufacture of ice, and its marketing at prices which in many regions easily compete with those of the natural product, have simplified this phase of the water question in the most marked way. Other things being equal, whether the householder decides to use the natural or the artificial ice will depend much upon the climate of his home and the market price of the ice. The natural ice is just as good as the artificial when it comes from pure sources. It is claimed by some that the natural ice melts more slowly than the artificial, and is in this way, other things being equal, cheaper. But similar claims are made for the artificial ice. The writer has tested the relative rapidity of melting of the natural and the artificial ice in New York under the greatest variety of conditions—in small pieces and in large, in the dark and in the light, in diffused light and in the sunshine, in hot places and in cool—and can find no absolute constant difference in the rapidity of melting. One seems to be just about as durable as the other.

THE CONTROL OF SCARLET-FEVER.[1]

BY F. H. HIGGINS, M. D. CORTLAND, N. Y.

When an ambush is unmasked the fear of it is gone. Diseases were mysteries; they were dispensations of Providence; they were punishments to be submitted to. So long as the cause was unknown, and no method of prevention recommended itself, it was the part of philosophy to endure stocially what could not be cured.

By the revolution in our knowledge of the contagious diseases brought about by the germ theory, this position is radically changed. It is within the last decade that a sure basis for our belief in the bacterial origin of disease has been reached. But already so much has been made clear that tame submission to epidemics is criminal.

The first struggle against such diseases as scarlet-fever, diphtheria, and measles, was a defensive one. Long ago it was found that after such a malady had gained an entrance into the system, almost nothing could be done to arrest its course until its force was spent. In spite of a vast amount of experimentation, this fact still remains true. After one of these contagious diseases has once developed, good nursing may help the stricken one, but we are entirely unable to reach the *fons et origo* in his case.

There is something, however, that we can do. One of these attacks is as much an accident as to be struck by a rifle ball. It is the result of an extraneous cause acting

[1]This essay was awarded the prize (a complete set of the Medical and Surgical History of the War), offered by Dr. J. G. Orton, of Binghamton, N. Y., in aid of popular sanitary science.

upon the system. The feeble and the strong are equally liable.

The earliest efforts of physicians and friends were confined to serving as an ambulance corps to care for the wounded. Then as some idea of the direction of the invisible arrows was obtained, defences began to be erected. By isolation, diseases were not allowed to spread so rapidly from one to another, until whole families and communities were laid low. Common observation had taught us this before the microscope had clearly revealed our enemies to us.

Now, by the great increase in the exactness of our knowledge, we may begin an aggressive warfare. We are just beginning to reach that important principle that the best defence is an attack. We are just finding out that there is a possibility of annihilating such diseases as scarlet-fever, so that we need fear its ravages no more. If such an end shall be reached, it is essential that not only physicians, but every member of the community, shall know the plan of attack and assist in carrying it out.

In the first place, it needs to be thoroughly, radically, and once for all understood that scarlet-fever is a contagious disease, and that when any case occurs, it has been contracted from some other case, either directly or indirectly.

Generally by careful investigation this can be shown. Cases do occur, however, in which the connection cannot be discovered. When we remember that the contagium is something unappreciable to the ordinary senses; that momentary contact with a garment that has been worn by a person who has had the disease is sufficient to cause it; that the disease does not manifest itself until some days after it has been received into the system; that it can be carried by the milk we drink, caught in a street car from one just recovering, or brought by a well person from the sick room, it is little wonder that in some cases an exact statement of the cause cannot be given. There was a time

when farmers explained the appearance of thistles on a piece of new ground by spontaneous generation, and when frogs were thought to come from clouds. After all the world had conceded that animals and plants such as these came from an ancestor like themselves, there still remained scientific men who believed that the microscopic life which always appears in standing water or organic infusion, was of spontaneous origin. The careful experiments of Pasteur, repeated many times by scientific men everywhere, have shown that in every case the development of living organisms, even of the minutest and simplest kinds, is owing to the presence of germs carried thither by the air or some other medium. The ordinary kitchen operation of canning is an every-day experiment, proving the same thing. If mould appear in the fruit, no woman explains it by chance or by development inside the can: she knows that the cover has become loose, and outside air, germ-laden as it is, has gained entrance there. Precisely the same is it with the germ of scarlet-fever. We may be sure, if we find it present, that it came from somewhere. How did the first case originate? We know as little about this as about the origin of life anywhere else; but this we know: snakes, tigers, and English sparrows will not develop spontaneously if we can get rid of those now on hand.

We need have no fears then, that our labors of extermination may be frustrated by the disease all at once appearing *de novo*.

Although there is still some dispute as to the exact appearance and scientific name of the disease germ of scarlet-fever, something may be stated. It is probably a bacillus. These bacilli are long, narrow, rod-like germs, often in chains by attachment end to end. It has been called, provisionally, bacillus scarlatinae. It has been cultivated and grown outside the body on the serum of ox blood. We know some of the conditions most favorable to its growth, and what substances are prejudicial to it. This

part of our knowledge is still fragmentary, but, owing to the zealous work of microscopists, is rapidly increasing. By comparing what has been learned by direct observation of this germ with what we positively know of its congeners, a very clear idea of its behavior may be obtained.

After the entrance of the germs into the system, about three days are devoted to their multiplication before they have reached a sufficient number to produce any visible effect. This time may vary according to the number and activity of those introduced; then languor and vomiting are followed by red throat and strawberry tongue; this soon by a bright, red rash. At the first stage of the disease every part of the system is reached by the germ, and may give it off to some one else. The germs floating in the breath and in the exhalations from the body may carry the disease, but not a long distance. It has been discovered that one must come as near as three feet to receive the disease at this time. This is contagion by personal contact. It rarely occurs. Fortunately it does not occur at all until after the fever is plainly manifest. It is like a rattle-snake, and gives fair warning before it strikes. It is very different from measles in this respect, for this is most dangerous to others when the child is first coughing and no rash has yet appeared.

During the height of the disease it is said that the bacilli scarlatinae cannot be found. It would not be safe to say that the disease was not then to any degree contagious, but with careful isolation it certainly can be kept from spreading. It is after the height of the fever has passed, and the little one in a fair way to being well again, that the danger is greatest. Now the skin is flaking off in shreds and scales all loaded with the germs, seeking new fields to conquer. The skin is the peculiar location of the disease, and from it the contagion spreads. It is not now by exhalations innocuous at arm's length, but by floating scales bearing the bacilli upon them like warriors in their chariots.

These lodge in clothing, propagate themselves in milk, and are even transported by the mails for hundreds of miles. It indeed appears like one of the labors of Hercules to follow and destroy these myriads; and so it is. But to prevent their escape is not so desperate an undertaking. When the lid to Pandora's box was raised, by no possibility could all the evils there contained be recaptured or subdued. In the past we have been as foolish as she.

By simply keeping the skin greased, the far and wide dissemination of the disease during convalescence may be stopped. By adding to the unguent some substance detrimental to the germ, and not harmful to the patient, such as thymol, or eucalyptol or carbolic acid, the safety is rendered nearly absolute. A small amount of oil of eucalyptus in lard or sweet oil makes almost an ideal preventative of danger at this period, and is rather beneficial than otherwise to the sufferer.

So confident are some practitioners in the efficacy of systematic unctions to prevent contagion that they do not hesitate to allow intercourse with other members of the family, even while the desquamation is going on. But it is not wise to trust to this alone.

Before the patient is restored to society he should be given a final, thorough bath; especial attention should be paid to the hair and any place that might afford lodgment to the bacteria. With a final greasing and clean clothing throughout, he may return to the family or to school.

It would be a grave oversight, however, to carefully disinfect the patient and neglect to destroy all the contagium in the bedding and room which he occupied. It is to simplify this part of the work that it is so much better at the commencement of the disease to put the bed into a bare room. In such a room, with no lurking places under carpets and behind curtains, our enemy stands but poor chance in a hand-to-hand conflict with such modern weapons as carbolic acid, corrosive sublimate, and boiling water.

These germs are weak individually ; they are strong only in numbers.

Let one case in an ordinary family illustrate just how we may get rid of scarlet-fever there.

The oldest boy in a family of four had just begun to attend public school. Some of the scholars had scarlet-fever about their clothes and gave it to our little friend, for which, in my opinion, an action for damages would be perfectly justifiable. As soon as the rash began to appear, a bedroom upstairs was emptied completely. A bed, stand, and two wooden chairs were allowed in the room, with a small stove. A sheet dampened with carbolic acid water was hung over the door. The mother or nurse attending him was directed to go to the other parts of the house as little as possible. If obliged to leave the room, she was to wash, and change her gown. After the fever subsided and peeling commenced, the child was well greased all over twice a day.

At the end of about three weeks, although four weeks is the rule, he was well washed, especially the hair, greased, dressed in clean clothes, and allowed to go down stairs. The bedding was thrown out the window on a low roof, and allowed to air all day. It was then boiled in chlorine water made by adding two ounces of white vitriol and four ounces of salt to the gallon of water. The room was washed and mopped with corrosive sublimate in the proportion of one dram to the gallon of soft water. If there should be any nooks or corners, or any material in the room that could not be reached with the scrubbing brush, then sulphur should be burned. It must always be accompanied by steam, and used in large amounts. The proportion recommended by Dr. Edson, health officer for New York city, is three pounds for each one thousand cubic feet, used for two hours. An ordinary ten by twelve bedroom contains about one thousand cubic feet. The dish containing it should be set in a pan of boiling water in the middle of the

room, a little alcohol poured over it and lighted; then the room closed tightly and left for two hours. There is no danger, but some kinds of goods will be bleached by it.

It must not be forgotten that fresh air and sunlight are death to these germs, and are two of our best weapons.

In this case that has just been detailed, not one of the little brothers or sisters took the scarlet-fever, nor did any case arise from it. At that particular point scarlet-fever was annihilated.

That the fortunate result was due to care, not luck, was illustrated in less than a month, when this little one broke out with chicken-pox. While scarlet-fever is the most terrible scourge of childhood, chicken-pox is the mildest. So the children were allowed to play together, and as a result, as might have been expected, it affected them all. The means taken to limit the spread of scarlet-fever in this case are no more than can be easily carried out by any ordinary family. It is certainly less trouble than to nurse another child through the sickness. The happy results when the plan, simple as it is, is well carried out, certainly justify the effort. The details in each house may be varied intelligently, provided we are acquainted with the object to be attained, and the means adequate. For we fight not as one that beateth the air, now that we know as much of the habits and nature of the germ as if it were a visible enemy.

Diseases of foreign importation, as the plague, cholera, and yellow-fever, have been held at bay by such means as these. Is it not time to plan a campaign against some of our intestine foes?

The inducements to such action are certainly strong enough. At least one ninth of all the cases of deaf-mutism are owing to scarlet-fever. Of the large number of cases, deaf in one ear, perhaps one half are due to the same cause. A large contingent of cases of kidney affections date back to scarlet-fever. A chronic sore-throat is often the result

of the disease. The number of deaths directly due to it is excelled by none of the children's diseases.

The excuse given for allowing children to catch the measles—that they had better have it and done with it—cannot apply here. Scarlet-fever is most severe and dangerous in younger children; older persons often escaping altogether.

There is no other contagious disease whose habits are better understood, or that can be more easily arrested in the present state of our knowledge. Whatever excuse there may be in allowing all other fevers to spread at their own sweet will, there is none for scarlet-fever.

When we shall be successful in subjugating this, the armament and experience obtained may be hopefully turned to such lurking enemies as diphtheria.

That so general and horrible a disease as small-pox has been thoroughly controlled by vaccination has ever since been an inspiration in the efforts to obtain similar results in others. But although thousands of experiments have been made, no vaccine has yet been discovered for the disease under consideration. Pasteur's inoculation for hydrophobia is promising, a yellow-fever inoculation is being investigated, and there is still a ray of hope in Koch's consumption cure; but none of them is yet beyond the experimental stage. Enough has been found out to warrant the hope that some virus may be discovered which, introduced into the system, shall fortify it against these diseases. Possibly some phagocyte may be found which shall defend the system of a child from the scarlet-fever germ.

But these studies are after all working at the wrong end of the problem. An attack is the best defence. We do not in this age erect high walls around our cities, but place cannon there. Soldiers do not encase themselves in steel armor, but depend on their guns and the generalship of their leaders to defend them. We may better strike the enemy than to spend all our time manufacturing improved breast-plates.

Can such a campaign be practically carried out? There are, doubtless, difficulties. If there were not, it would not have now been left unaccomplished. Nor is there any other way to surmount them than by steady persistence in some well directed plan. It must be as Grant captured Petersburg—convinced that our forces are superior to those that are against us, we must move on the enemy and fight it out on this line if it takes all summer.

Paradoxical as it seems, one of the most perplexing difficulties is the occurrence of mild cases of the disease. Although the disease is one of the most malignant known, a large proportion of the cases are of a very mild type. The child does not complain, the rash is very slight, and the whole case is managed by the mother as "scarlet rash;" or perhaps a doctor is called in and does not like to frighten the family, and so calls it scarlatina. Scarlatina means nothing less than scarlet-fever, and "scarlet rash" given to a neighbor's child, may be fatal scarlet-fever as well as if caught from the most severe case.

Isolation, cleanliness, inunctions, and antiseptics, are just as important in these light cases as in any, if the disease is to be stamped out from among us. Fortunately, at least for general interests, selfishness alone will lead to a proper care of these cases if the whole matter is properly understood. No physician who has seen the dropsies, rheumatisms, and running ears, resulting from the neglect of these mild or unrecognized cases of scarlet-fever, can conscientiously fail to warn his families of the results of such laxness. As the public generally comes to understand medical matters better, as they are doing, these light cases will be better cared for.

It should be thoroughly and generally understood that a "scarlet rash" is a snake in the grass, both to the patient and to the community.

Certain epidemics of scarlet-fever, especially in England, have been thought to originate from cows afflicted

with a disease of similar nature. If this be so, it would seem to complicate the situation very materially. If new centres of infection may appear at any time from contact with the lower animals, then there is some excuse for despairing of ever ridding ourselves of this scourge. The result of all the investigations on the Hendon outbreak, however, seems to be that the disease among the cows was not scarlet-fever. It is more likely that in such cases the milk becomes infected, from some cause, after it is drawn, and that is a matter which we may and should control.

Criminal proceedings are none too severe for a milkman who will allow a case of scarlet-fever in his family to communicate the disease to all the children on his route through the medium of the milk.

Another practical difficulty is securing general co-operation in the cases which occur in indigent families. With only one room in the house, with only one fire and no possibility of getting another, with no conveniences and no help, the task of carrying out the prophylaxis described, simple as it is, looks impossible. Many times with such conditions the physician abandons all attempt to separate the sick from the well, with the inevitable result that all the children in the family are affected, with more or less fatal result. The neighbors' children follow, and from them a local epidemic. Pessimists among physicians and health officers point to such occurrences and say all efforts are hopeless. To them the idea of overcoming the disease looks as Utopian as the decree of a king to abolish death in his domains.

But would it not be policy for the government to take charge of such cases, and do for them what the families themselves cannot do? Does not the loss to the state now resulting from the devastation of the disease more than counterbalance, on a money basis alone, all the expenditure which would be involved in combatting it?

It is true that in poverty-stricken homes no adequate

measures for preventing the spread of disease to the families about, or to the children of the same public school, can be depended on. But if an officer were appointed in each town or ward, with sufficient authority and compensation, the thing could be done. Either by supplying proper nurses, or taking the case to a hospital, such care should be given that the rest of the family could be spared and the community at large not imperilled. In all this work, too, the object would be not simply to protect certain individuals at certain localities, but to know that the spread of the disease itself was checked.

It will add much to the enthusiasm with which conscientious physicians and families now endeavor to meet the disease, to know that the same work is being done all along the line. By a general oversight it should be possible to trace a steady and rapid decrease in the amount of scarlet-fever in the land. What louder call on the knight-errantry of the nineteenth century than to endeavor to destroy this hydra-headed monster that has been devouring our children?

SUMMARY.

The cause and transmission of scarlet-fever is now sufficently understood to enable its spread to be controlled.

By concerted action and state supervision, it is possible to rid our country of this one disease.

The factors favorable to such a result are,—

1. The disease is seldom given during the first stages or when it cannot be recognized.

2. Immunity extends to within three feet of the patient in the first stages.

3. The spread of the disease is due almost entirely to the epithelial scales exfoliated from the skin.

4. The danger from this exfoliation can be controlled.

5. Simple rules carried out render safe the room in which the patient has been confined.

6. A general destruction of the disease germs wherever

they manifest themselves, will soon greatly diminish its prevalence and the difficulty of its control.

The difficulties which beset the practical carrying out of such a general campaign are,—

1. The neglecting of mild cases, which must be met by more general education and stricter reports to health officers.

2. The possibility of new centres of infection from lower animals, although this is rare and doubtful.

3. The lack of definite information on the subject, which must be met through the public press.

4. The occurrence of the disease in homes of poverty, where means for its suppression will not be carried out by the family. These cases must be cared for by the state, which can well afford to do it.

TUBERCULOSIS AND THE FOOD SUPPLY.[1]

BY D. E. SALMON, D. V. M., CHIEF OF THE BUREAU OF ANIMAL INDUSTRY, WASHINGTON, D. C.

The frequency of tuberculosis in mankind, and the great number of deaths which result from it, make it important for us to consider from time to time the possible means of prevention, and to inquire as to whether we are doing all in our power to this end. It is not my intention to treat the subject at great length, or to enter into the details of scientific work which must be already quite familiar to the members of this congress. I desire rather to bring out clearly a few salient points, and to make some practical suggestions.

I shall assume without argument as already established by scientific investigations that tuberculosis is a parasitic disease; that it is caused by the multiplication of a specific micro-organism in the tissues of the animal body, and by no other means; that this micro-organism has no habitat in nature outside of the animal body, that it may be distributed in various ways from this habitat and generally gains entrance to the bodies of its victims, either by being inhaled with the air in which it is floating or by being ingested with infected food or drink; and, finally, that hereditary transmission of this disease has been greatly exaggerated as a factor in its production, and may, from a practical point of view, be left out of consideration.

Of the two methods by which the disease is contracted,

[1]Read before the American Public Health Association, 1893.

with men as well as with animals, it may be admitted that the most frequent, and, therefore, the most important, is the inhalation of the micro-organisms suspended in the inspired air. My paper, consequently, deals with the less important of the two principal modes of infection; but while it is the less important etiologically, it is the more important from the point of view of preventive medicine, because it is more easily controlled by the efforts of sanitarians.

I have no means of estimating the proportion of the cases of tuberculosis which arises from infected food, but am prepared to admit that tuberculosis of the abdominal organs and tubercular meningitis, particularly of children, are generally caused in this way. For convenience in treating the subject, we must consider separately infection through the milk supply and infection through the meat supply.

Tuberculosis is one of the most common diseases of milch cows. It exists in many dairies, and may effect 50, 75, or 100 per cent. of the animals in large herds. We do not know the average proportion of affected cows in this country, but in the dairies around our large cities from three to five per cent. have been found affected when the diagnosis was made by the ordinary methods of examination. By the use of tuberculin, a much larger number of infected animals is found. In Europe, by the use of tuberculin, from 50 to 80 per cent. of cows have been found to give the reaction when a considerable number was tested. In the United States, we have no statistics of the results of the tuberculin test except with herds known to be tuberculous. As many cases of the disease are revealed by tuberculin, however, which would not be discovered otherwise, it is certain that the proportion of affected cows in the United States, if not as large as in Europe, must nevertheless be very considerable. If no more than fifteen or 20 per cent. of our cows should prove to be infected, it would still be a very serious

matter and one well worthy the consideration of this congress.

Fortunately the milk from all tuberculous cows does not contain the bacilli. When there are tubercules in the udder, however, the milk may contain immense numbers of these germs, and this is particularly the case if the tubercular mass softens and its contents escape into the milk ducts. The milk from cows so affected must be considered an extremely dangerous article of food.

In case there are no tubercles in the udder the milk of affected cows may or may not contain the bacilli,—generally it does not. As the disease progresses and the vital forces are diminished, the number of bacilli in the milk and the frequency of their occurrence increases. In other words, the nearer we approach the death of the animal the more certain we are to find bacilli in the milk. At this period the milk secretion is, of course, greatly diminished, and may entirely cease.

The danger from using infected milk increases with the number of bacilli which such milk contains, and decreases with the degree in which it is mixed with the milk of healthy cows. If there is but one tuberculous cow in a large herd, and the milk of the herd is all mixed together before it is consumed, the danger to the public health would largely disappear, but if the milk is not so mixed, or if a large proportion of the herd is tuberculous, then the danger would be correspondingly greater.

With these facts before us, we are prepared to consider the great practical question, How can the prevalence of tuberculosis in dairy cows be lessened, and the danger from infected milk be diminished? Evidently the accomplishment of this object requires a careful and periodical inspection of the herds from which the milk supply is obtained. This inspection must consist not only of a physical examination, but must also include the tuberculin test. There must in addition be some means provided for securing the

destruction of animals found to be tuberculous. The great obstacle to the introduction of such measures will no doubt be found in the expense which must necessarily be incurred. The test with tuberculin requires time, and the animals must be kept under constant observation for at least two days. This makes it necessary to have a larger number of inspectors than would otherwise be the case.

Tuberculin has been very expensive and difficult to obtain in large quantities. Recently the bureau of animal industry has been preparing it, and furnishing it to state and municipal boards which have the subject of tuberculosis in animals under their jurisdiction. It has seemed to me that this was one of the most practical methods of cooperation between the national and local authorities for controlling this disease, and I hope the bureau may be able to continue it, and increase its facilities to keep pace with the demand. This, however, depends somewhat upon the appreciation with which our effort meets, and the support which is received from those interested. With an unlimited supply of tuberculin furnished without expense by the government, or even for the actual cost of its preparation, the problem of control is considerably easier.

Nevertheless, the difficulties at best are enormous. Eighty per cent. of a herd may react to the tuberculin test. Of these some will be advanced cases of generalized tuberculosis, with the mammary glands affected. The disposition of such cases would be an easy matter. A large number, however, would be but slightly affected, and would require a most careful post-mortem examination to discover the lesions. In some, it would be impossible to find any lesions. Many cattle would, therefore, be condemned by the tuberculin test, the milk of which would be perfectly wholesome; and, on the other hand, some cows in an advanced stage of tuberculosis, with very prominent lesions, show no reaction to the tuberculin test.

It must be evident from these statements that while

tuberculin is a great aid to the diagnosis of tuberculosis, it is not infallible, and may lead to some errors. It is also evident that the disease cannot be eradicated with certainty by our present means of diagnosis, unless every animal in an infected herd is slaughtered. On account of the extent and distribution of this plague, the slaughter of all herds in which tuberculous animals are found does not appear to be practical.

If by the tuberculin test we could infallibly detect every infected animal, it would be possible to establish herds free from the disease, and to maintain this freedom by testing all additions to the herd. This was the hope inspired by the first experiments made with this remarkable agent. Later, when it was found that some tuberculous animals did not respond to the test, those interested in the subject became more or less discouraged, and have settled down to the conclusion that tuberculosis is still an unconquerable disease, as it has always been in the past. Theoretically this conclusion is correct, but there is often a wide difference between theory and practice, and the conclusions from laboratory experiments, and from a few tests in the field, should not be allowed to arrest our efforts in this direction.

Whatever may prove to be the proportion of tuberculous animals in the dairies of the country as a whole, I know from experience that many herds of cows are entirely free from the disease. This may be proved, both by the history of the herds, and by the tuberculin test. Now, taking such herds as a starting-point, with proper precautions to prevent their infection, I believe it quite possible to breed a race of cattle practically free from the disease. And while this is being done, the known infected herds should be destroyed.

A great work like this cannot be accomplished by an individual, nor by a single board of health. There must be co-operation, a unity of effort, and the combined influence and power of the nation, the state, the local authority, the

dairymen, and all organizations that are interested. Many individuals would resist, and endeavor to obstruct any efforts in this direction; there would be predictions of failure from persons of influence and authority; there would be unforeseen discouragements. Some herds would doubtless be infected by the sputa of tuberculous attendants,—others by contamination from different species of animals; but such cases, I think, would be comparatively rare, and by systematic inspection should be detected before much progress was made.

While, therefore, the complete eradication of tuberculosis among dairy cows may be a dream and theoretically impossible, I firmly believe, that by educating the public and by the united effort of those in authority, the extent of the disease might be reduced to insignificant proportions.

It will be at once asked if the result would be of sufficient importance to justify such an extraordinary effort and expenditure. This, of course, is a difficult question to answer, and it might be well to have extensive and accurate observations made, with a view to determining more definitely the mortality from tuberculosis induced by infected milk—particularly with children. My impression is that very valuable results might be obtained by such an inquiry, and I should be glad to see it made by a committee of the American Public Health Association.

In addition to the effect on the public health, the control of tuberculosis in cattle would save the loss of much property from the ravages of this disease, and the healthy cows taking the place of diseased ones would yield a much greater income to their owners. With the prospect of results so important as this, the subject is one deserving the most careful consideration.

Infection through the meat supply is apparently a less important question from a sanitary point of view. Although tuberculosis may be generalized, and the bacilli scattered through the various organs of the body, the pro-

portion of infected animals is much smaller with beef cattle than with milch cows, and the disease when found is generally less extensive. In addition to this, cooking must in many cases destroy the bacilli. It must be admitted, however, that meat is often eaten so slightly cooked that the bacilli would not be injured by the heat to which they have been subjected, and also that the carcasses of many tuberculous cows are put upon the market by unscrupulous persons, and the meat consumed by an unsuspecting public.

We have now a national meat inspection in many of the largest abattoirs of the country, and this is being gradually extended and its workings perfected. The national inspection, however, only applies to animals and meats which are the subjects of interstate or foreign commerce. Abattoirs where animals are killed exclusively for local consumption in the state where they are situated, do not come under the national jurisdiction. The tendency is, therefore, for such establishments, if they can avoid municipal inspection, to slaughter animals which would probably be condemned under the national inspection. There is, consequently, a necessity for even greater precautions by the city boards of health to prevent the slaughter of diseased animals for food than there was before the national inspection began.

There are all degrees of tubercular infection found in cattle at the time of slaughter. The distribution of the lesions is often general, and nearly every organ of the body is occasionally found affected, or but a single small gland may be invaded, and this so slightly that a positive diagnosis can only be made after a microscopic examination. Between these two extremes the disease is found in all degrees of progress. In the earliest stages of the disease, or in the milder forms of infection, it is generally admitted that the flesh is wholesome, and free from danger, but the tubercular organ should of course be destroyed. In the advanced and generalized cases there can be no doubt that the whole carcass should be destroyed. There is here, as

with other diseases and unwholesome conditions, some difficulty in drawing a line for defining exactly which carcasses shall be condemned and which shall be allowed to go into consumption. In case of doubt, the consumer should have the benefit of the doubt, and the carcass should be condemned. The inspector must, however, act in the light of conscience and modern investigation, and should not be led by ignorance and prejudice to destroy articles of food which are wholesome and free from danger.

If a large organ, as for example a lung or liver, is extensively invaded, or if several organs, such as the lungs, liver, and lymphatic glands, are involved, the carcass should certainly be destroyed. If this rule were enforced at all abattoirs, thousands of carcasses, which in the past have gone into the meat supply, would in the future go to the rendering-tanks for manufacture into fertilizers. It seems to me that this could not fail to have considerable influence of a favorable character upon the public health.

I wish it were possible for me to make more definite statements as to the value of the inspection of dairies and meats as a means of preventing tuberculosis in people. There is so much uncertainty as to the proportion of the cases of human tuberculosis which arise from the ingestion of infected food, that it appeared to me preferable to avoid speculation in regard to it in the present condition of science. The most that can be said is, that infected food must be an important factor in the production of the disease, and it is the one which is most easily controlled. I have for years believed in the desirability of a thorough inspection of milk and meat, as one of the first measures to be adopted in the endeavors to diminish the prevalance of this disease, and while my opinions as to the danger from infected food have been somewhat modified, on this general proposition they are unchanged.

What is needed is a continued effort to extend and perfect that national inspection of meat until all which goes

into the interstate and foreign trade comes under its operation. This should be supplemented by a far more perfect system of municipal inspection of the animals killed for local consumption than exists in any city of this country at the present time.

The inspection of milch cows, and an effort to control tuberculosis in dairy herds, is no less important. The national government has not yet attempted to make such an inspection, and there are many obstacles to prevent such action, the chief of which is the doubt of its power under the constitution to enforce regulations concerning the cattle of any particular state, the milk from which is sold within that state. By co-operation between the national and local authorities, however, it is quite probable that all of these obstacles might be overcome. The subject is of such great importance that it merits an earnest effort in this direction, and I trust that the discussion of the subject before the congress will hasten the time when such an effort shall be made.

SCHOOL HYGIENE.[1]

BY D. F. LINCOLN, M D.

Upon the formation of the committee it was thought best to divide the work among the members, assigning a separate department to each. It has been found in practice, however, that the ground has not been fairly covered by this plan. Long and careful special papers have been prepared and published by some of the members, while others, though deeply interested in the work, have not found time to treat their assigned subjects in a manner which would justify them in publishing results. It has, therefore, seemed best to the chairman of the committee to take the responsibility of drawing up a brief but comprehensive statement of principles covering all the topics; submitting the whole to each member, and presenting the matter to the Section of State Medicine.

It seems desirable in doing this to avoid statements which are open to reasonable doubt. It is thought that the most useful result can be gained by a simple, untechnical presentation of facts, omitting discussions, statistics, and arguments; with the object of securing the attention of school authorities, teachers, builders, and others interested in education.

SITE, DRAINAGE, AND SEWERAGE OF SCHOOL BUILDINGS.

1. *Good Light.*—This point has been seriously neglected in many city sites, for financial reasons. The neglect to

[1] Report of the committee on school hygiene, presented to the section on state medicine at the forty-fourth annual meeting of the American Medical Association, Milwaukee, Wis., June 7, 1893.

secure good light has been demonstrated to be an important cause of near-sight in scholars. The desired object can be attained by reserving a tolerably wide strip of land around the school building at the outset, and by municipal regulations restricting the height of neighboring structures. It is suggested that the height of such buildings around school-houses should not exceed one half the distance between them and the school-house; or, that the line drawn from the foot of the school-house wall to the upper part of the other house, should not form an angle with the horizon exceeding 30°. In small towns the space for play-grounds should be much greater—at least a half-acre.

2. *Sunlight.*—If possible, the sun should enter every room in the house at some time in the day, but chiefly out of school hours. The play-grounds should be placed, if it can be so arranged, on the sunny side of the house. There should be no trees overshadowing the house, since this causes dampness.

3. *Neighborhood.*—Disturbing influences, as the presence of large bodies of working people, railroads, noisy streets, engine-houses, are injurious for various reasons, partly as furnishing undesirable outside associations. Immorality or filth should not be suggested in the surrounding neighborhood. A main city street is commonly to be avoided. The vicinity of offensive trades, as tanneries, rendering establishments, refineries, and gas-works, is to be avoided.

4. *Soil.*—A damp soil is of itself a serious objection to a site. The case is worse if the site be low, with poor natural drainage and poor opportunity for artificial relief. If it be necessary to build on a springy piece of ground, a trench must be dug around the foundation to a depth below the cellar floor, and far enough from the building to insure the safety of the walls; in this, drain tile with loose joints is laid, discharging away from the building at some lower point. It is useless to cement the cellar floor for the

purpose of excluding water, but cement or asphalt forms a good protection against dampness.

School yards in towns should be so paved (not gravelled), and underdrained if necessary, as to become dry within an hour after a rain. Dry walks should lead to the out-buildings.

5. *Out-Buildings.*—If privies are employed, they should never be within fifty feet of the main building. They should be separate for the sexes, with entirely separate paths of access, and having a board fence between. Dry earth or sifted ashes should be sprinkled over the contents once a day. The entire contents should be removed once a fortnight. The receptacle must be so constructed that such removal can be effected easily and completely; or it should itself be removable with its contents. An iron trough on wheels, or a metal pail is suggested.

Urinals must not be made of iron, and they had better not be made of any metal. Impervious material, such as glass or oiled slate, is best. Cement is very objectionable from its porosity. Joints between slabs should be perfectly tight.

6. *Water-Closets.*—When a supply of water is at hand, water-closets are the best arrangement. They may either be single, or may consist of long troughs corresponding to a number of seats. The pan closet is undesirable, since its inner parts are not freely cleansed by the flow of water. Of the simpler forms of closets, all those which do not furnish a quick and free discharge of water, cleansing the bowl thoroughly and removing all the contents within a few seconds, are to be absolutely rejected. A noisy apparatus is exceedingly objectionable for closets which are placed (*e. g.*, for teachers' use) in the vicinity of schoolrooms; the noise may proceed either from the tank or the basin.

One of the simplest forms of apparatus for schools is the long tank of cement or iron placed under the range of

seats. The bottom is covered with a few inches of water, and slopes to an outlet so that by raising a plug the whole contents are quickly discharged into the sewer, after which cleansing is easily effected by a hose and broom. The addition of an automatic flushing apparatus acting spontaneously at fixed intervals has been found desirable.

All closets and urinals in a school-house must have special ventilation by forced draught. No mechanical contrivances or disinfectors do away with the necessity of personal inspection and faithful cleansing by hand.

7. *Plumbing.*—The principles of drainage and sewerage, commonly termed the art of plumbing, are the same for school buildings, as for other edifices. It may be stated that pipes and other fixtures ought to be so placed that they can be seen by lifting movable boards, without having recourse to a carpenter, or mason, or plumber, to disclose their intricacies.

It should be further understood that the whole system is under the control and supervision of some responsible and intelligent person, who possesses sufficient plans and drawings of the system, and pays frequent attention to its condition.

CONSTRUCTION.

1. *Safety.*—The chief danger is found in old buildings and in those not originally intended for their present use. In such we occasionally find conditions which are nearly sure to cause accidents in case of a panic. The staircase is the important point. It must be very strong, wide, and easy; not steep, not sharp-angled, nor spiral or with wedge-shaped steps; it should have a platform at the turn. It is safer without a well; if balusters are used they must be high. In large buildings a staircase should be placed at each end. Halls and outer doors must be wide, and all doors open outward. Fire-escapes on the out-side are at best an undesirable refuge, and in the ordinary forms may be very dangerous to a crowd of frightened children. Discipline

and practice in "fire-drill" or quick, orderly march from the school are by far the best safeguards.

2. *The School-Room.*—The size of a class-room should be governed by the number of pupils it is intended for. If we assume that fifty can be attended to by the teacher, and that 200 cubic feet of space is allowed per head, a room $24 \times 33 \times 12\frac{1}{2}$ will answer well. The oblong shape is desirable. If the dimensions here given are exceeded in length, there will be difficulty on the teacher's part in supervision and on the scholars' part in seeing what the teacher may show or write on the board. A greater depth or distance from the windows than 24 feet will impair the lighting.

3. *Illumination.*—The lighting of a room for school-work requires a much larger allowance of window space than is needed for dwellings. The windows must be square headed, and brought very near the ceiling; there must be no projections (cornices, piazzas, Italian shades) to interfere with the free entrance of light. The total amount of window-glass on a liberal allowance may equal one fifth the floor space; if fully exposed to the sky, less will suffice. Roller-shades are of most use when the roller is placed at the foot of the window. Light coming wholly from one side (*viz.*, the left hand) if sufficient in amount is best for the eyes; if this plan in any case appears likely to give insufficient lighting, owing to local conditions, windows may be added at the back, possibly also at the right (but in the latter case at a very high level). Windows in front of the pupils are very injurious to the sight. The wall should be colored of a neutral tint, or with a faint shade of blue or green if liked. The ceiling should be white. It must have no cross-beams placed transversely to the light. Blackboards must be placed between windows.

4. *Miscellaneous.*—The size of recitation-rooms must be planned upon the same principle as that of school-rooms—*viz.*, that of allowing 200 cubic feet per scholar.

It is desirable, when possible, to limit the height of a building to two stories above the street, inasmuch as injury not infrequently results from the excessive strain of climbing upstairs.

Accommodations for hanging clothes should be furnished outside of class-rooms, with good provision for ventilation. Enclosed spaces in the halls, open at top and bottom, are suitable.

Cellars or basements must be high, dry, well lighted, and thoroughly wholesome. If there is no cellar, there must be a dry sub-floor space under the whole building.

Dust being a destroyer to pure air and a foe to health, care must be taken to avoid for floors such material as produces dust,—if of cement, it must not crumble; if of wood, it must be "filled" so as to be impervious.

VENTILATION AND HEATING.

A very large proportion of schools are so poorly provided with ventilating arrangements that they are practically dependent upon open windows. To relieve this unfortunate state of things, the lower sash may be raised two inches (less in stormy weather) and a board placed in front to deflect the air upward. The upper sash (which ought always to be movable) may be lowered an inch. These measures are attended with little risk, and give perceptible though partial relief.

Perforations in the sash, window pane, or wall, also give some relief. Such methods may provide sufficient air for five or six persons in a room, but are entirely inadequate for the supply of a whole class.

The attempt to ventilate school-rooms in cold weather by the windows in the northern United States is either very dangerous to health or very ineffective, or both. The amount which can safely be admitted in this way may be one fifth to one tenth of what is needed. The existence of ventilating flues or openings does not of itself insure

good ventilation. Flues may be too small, or crooked, or partly or wholly stopped up; they may discharge into other rooms or the attic instead of the outer air; they may be unprovided with means for causing the air to rise in them; they may be in many ways badly planned. To enumerate the faults which may be committed would require a treatise.

It ought to be understood by every one concerned in ventilation that large collections of persons require very large amounts of air; that the amount should be calculated, and the size of the flues determined before the house is planned; that true economy requires us to consider the system of heating and that of ventilation as inter-dependent parts of one and the same problem; and that both should form a part of the original architectural design.

The amount of fresh air to be brought into the building for each pupil should be 2,000 cubic feet per hour for younger children (under ten) and 3,000 for high-school pupils. These amounts are calculated from the assumptions that the external "pure" air contains an average of four parts of CO_2 in 10,000; and that when the CO_2 has increased under the influence of respiration to the amount of more than six in 10,000, the air may be considered "impure." Dilution to the extent mentioned above will keep the air of the room below the point of "impurity" here assumed. The purity required by this standard is such that persons coming fresh from out-of-doors will not perceive any distinct closeness in the air of the school-room.

As regards the relative requirements at different ages, it may be assumed as proportionate to the different amounts of CO_2 exhaled by people of different ages. In the case of children of eight years, it is about two thirds as much as in young persons of fifteen.

If a low standard of supply is taken (say 1,000 to 1,500 cubic feet per hour), there will be a perceptible deficiency

of purity, which will have to be made up by an hourly opening of the windows on the occasion of recess.

If the cubic contents of a school-room equal 200 cubic feet per head, the entire air contents of the room will thus be renewed every four or six minutes. It is found by experience that the draught caused by the in-rushing air need not be troublesome in rooms which allow this amount of space per inmate. It is recommended that this be the average allowance of space.

In testing air for CO_2, it is important to take samples from the level of the pupils' heads, avoiding the admixture of the breath. If the condition of the air at that level is satisfactory, the end of ventilation has been gained.

The rapidity with which the air leaves the room may be ascertained by the use of the anemometer. In addition to this test it is desirable to apply the chemical test for comparing the discharged air with that of different parts of the room; for if the supply of fresh air is badly distributed, it may happen that in some parts of the room the currents are comparatively stagnant, and the air will grow more impure than the average of the room.

The animal impurities of the expired air (exclusive of CO_2) are probably, in part, of a poisonous nature. They, perhaps, include ptomaines as results of putrefactive decomposition. They are of infinitely more importance than CO_2, which is associated with them; but they cannot be conveniently made the subjects of quantitative test. Hence, the CO_2 test is employed, as indicating with *probability* how much the air has been affected by respiration.

The mere removal of foul air, whether by stoves, fireplaces, or ventilating flues, accomplishes but one half of the duty of ventilation. The other half consists in supplying a quantity of fresh air equal in bulk to that removed. It often happens that no special provision is made for this supply; in this case the entering air is drawn from many sources—out-of-doors, the halls, the closets, the cellars, and

indirectly from many undesirable places. Special ducts, therefore, are requisite for leading the pure outer air in large quantities to the school-room.

Such large quantities of air as are required cannot be safely introduced without previous warming. But the rapidity with which the air is changed is so great that a high temperature is not required; as a rule, heating can be effectually performed with air not hotter than 100° F. If the ventilation is sluggish, the air needs to be made correspondingly hotter in order to keep the room warm; but air thus overheated is apt to have an odor which indicates that it has been in some way injured in the process.

The locality from which the air supply is drawn should of course be such as to avoid impurities—dust, smoke, and bad smells.

A system of ventilation which is working well and sufficiently will produce a near equality of temperature in all parts of the room. The difference between the temperature at the floor level and that at five feet from the floor should not exceed 5°.

A system is efficient in proportion as it maintains its activity under widely varying outside temperatures. Ventilation is needed at 40° as much as 0°, but it is much harder to keep up a sufficient action in the former case. If the system is based on the draught of heated flues, some additional means for increasing the heat of the flues ought to be available for such mild weather.

The relative humidity of air commonly breathed in our winter climate is low, compared with that in western Europe. It becomes of necessity still lower when warmed. It is not, however, proved that the dryness thus obtained is generally prejudicial to health, either in schools or hospitals, although some individuals appear to require greater moisture. A part, if not the whole, of the unpleasant effect of breathing superheated air is due to the bad ventilation and the excessive temperature.

The thermometer placed at five feet from the floor should mark an average of 65° to 70° in our climate. This is considerably higher than is found desirable in western Europe.

It is to be presumed that the entering air is warmer than that which leaves the room, since it contributes a fraction of its heat for the warming of the walls and windows. If introduced at the upper part of the room, it will therefore fall toward the floor by degrees as it becomes cooled. Hence a level near the floor is a natural one for its exit. The proportion of CO_2 at the upper level of the room is not essentially different, on the average, from that in the lower part, and the level of the orifice of extraction is a matter of indifference as regards that point. If it be our object to get rid of superfluous heat, we should discharge the air from the top; this, however, is not to be considered normal or regular, but only to be applied when heat is excessive, as (for instance) in evening schools with artificial light.

It is possible to apply the above principles to the ventilating of the smallest school-house. A single room can be heated with an upright cylinder stove of ordinary construction, having around it an air space enclosed by a jacket of sheet iron. In the floor beneath the stove an opening is made, connecting with a flue led to the outer air, through which there will be a rapid and abundant inflow of pure warmed air. The supply flue may run in two directions, so as to be exposed to different winds, and each point of opening should be guarded with a valve. For the escape of foul air, openings near the floor are made in the brick chimney-flue, which should stand at the far end of the room. The stove funnel is carried across the room into the chimney, and its heat insures an upward draught. Open grates and ordinary stoves are aids to ventilation, but perform only a small part of the duty required.

"Direct radiation," or the use of steam heaters in the

rooms to be warmed, furnishes no supply of fresh air. If ventilation is fully provided for, as above described, direct heating is admissible as a supplemental supply in exceptional cases; but as a rule its use is destructive of good ventilation.

Effective work can be done either by furnaces or by steam heaters in the cellar ("indirect" radiation). In both cases it is exceedingly desirable to provide liberally in respect to the size and power of the apparatus.

On the question of economy in ventilation, and the necessary expense of good ventilation, much may be said. A great amount of warm air is necessarily thrown away in ventilation. It is estimated that a very perfectly ventilated building, filled with students, expends 50 per cent. more coal than the same building empty and closed, the temperature being the same. This difference would be greatly lessened if we could compare the case of a well ventilated, occupied building with one badly ventilated and occupied; the latter wasting, as it does, a considerable amount of heat by open windows and by the overheating which often accompanies bad ventilation. It is certain that the additional annual expense per pupil of the best ventilation need not exceed the price of one or two cheap lunches. The effect of perfect ventilation, where it has been tried, is to increase the pupil's power of work about 50 per cent., which is a direct saving to the town that pays for his schooling, to which must be added the gain in public health (which is not easily to be estimated), since a large percentage of school children are suffering at present a perceptible diminution of vigor from the effects of foul school air.

The employment of automatic regulators for keeping school-rooms at a given temperature is recommended as both economical and healthful. Modern methods often uselessly overheat the cellar in which the furnaces stand. Waste steam from the boilers ought to be converted to the

use of heating radiators. A liberal salary to janitors or engineers may insure a more intelligent control of the fuel.

The available methods for compelling air to move in ventilating flues are practically two,—(1) the ascensive force of heated air; (2) fans driven by steam or electricity for forcing air into the room or drawing it out by "suction." For the former method it is generally desirable to make available the otherwise wasted heat of smoke-flues, by causing them to run in the foul-air shaft.

PERSONAL HEALTH.

1. A minimum age for entering primary schools may properly be stated as five completed years.

2. The programme of daily work for little children should be widely different from that for older ones. A forenoon session may last three hours, but no exercise should last continuously more than fifteen or twenty minutes. There should be a constant change of activity, passive attention alternating with active work, recesses of a few minutes coming very frequently, and recesses of fifteen or twenty minutes at least twice in the session. Adherence to one posture should be required for only a very few minutes at once. Singing should come in more than once during the session. If an afternoon session of two hours be added, the tasks should be lighter than the forenoon tasks. Two hours must intervene between the sessions. The total amount of task-work and recitation required in primary schools may equal half the nominal period of the sessions.

3. Young persons of both sexes at periods of rapid bodily growth, and especially at that of sexual development, not infrequently require special relief or rest from school-work, which in the case of girls may come at periodical intervals. As the age increases the power of concentration and continuous work is strengthened. At the age of fourteen, five hours of sessions will be equivalent to four or four and a

half hours of work, to which an hour of home study may rightly be added. The usual length of recitations at this age may be about a half-hour; long recitations encourage listlessness. For pupils of full growth (eighteen), eight hours of school sessions and home work is an average maximum. This does not exclude the possibility of a greater amount of work for limited periods in exceptional cases among advanced pupils in vigorous health. It is presumed in these estimates that the school has two half-holidays or one whole holiday weekly.

4. The attention of teachers and parents should be called to the necessity for wholesome and sufficient meals for scholars, especially breakfasts and lunches. The health of many children is supposed to suffer from overstudy, when the chief cause of the mischief is the neglect to eat a proper breakfast, or the substitution of pastry and sweets for plain lunch. The establishment of lunch counters for the sale of hot milk, cocoa, and plain food, would be very beneficial in the case of many city schools. Lunch is not a superfluity, but a necessity in cases where long sessions and distant residences keep the pupils away from home five or six hours at a time.

5. The systems of calisthenics in common use—free-hand exercises in full class-rooms for five minutes at a time serve a very useful purpose for a partial relaxation, but are quite inadequate considered as a means of bodily development. For the latter purpose, gymnastic training of a more serious kind is very desirable. Its influence is felt in the development of the mental faculties; it adds force and firmness to the moral nature; it furnishes an important correction of those depressant influences of city life which have a tendency to lower the vitality of millions of our population at the present time. It is hoped that the systematic teaching of gymnastics to all our public school children may soon become an indispensable part of the school course, but it must always be remembered that the

more violent athletic sports tend to heart strain and other disabilities that shorten life.

6. The habit of constipation is often acquired as a result of deprivation of bodily freedom and confinement to a stooping or sitting posture, together with the mental tension of school work and the sense of constraint. In order to avoid this great evil and its frequent attendant, dyspepsia, it is desirable to give recess, with liberty of play out-of-doors, as often as is convenient. This is especially applicable to young children. Retention of urine now and then occurs under too strict school discipline, and may work serious injury. The friendly oversight of a teacher at recess is desirable—often indispensable.

EYESIGHT.

The eyes are often affected injuriously by school work carried to excess, or conducted amid unwholesome surroundings. There is a strong tendency to the production of near-sightedness, which can, to a great extent, be remedied by the avoidance of known causes. Among the direct causes of near-sight are bad light, bad position at work, too protracted work, bad print; and to these must be added, as indirect causes, bad ventilation and heating, poor food, and whatever impairs the vigor of health.

Light in school-rooms should never strike the pupil in the face while at work.

Excess of light is less common than deficiency, but is also harmful. No desk can be more than twenty feet from the windows of an ordinary school-room (supposing the top of the windows to reach the height of about twelve feet from the floor) without impairing the light.

A stooping position and the wearing of tight neck clothing while at work are injurious to the eyes.

To prevent scholars from taking bad positions in writing, it is recommended that the children be directed to sit upright, facing the desk squarely, and be taught vertical

writing. Also, that desks be slightly inclined, their front edge to overlap the edge of the seat a little, and the height to be such that the fore-arm easily passes over it. Seats ought to support the back and shoulders in reading without favoring a tendency to lounge. The foot must rest firmly on the floor or on a foot-rest. The average graded school requires three sizes of desks and seats to each room.

The habit of holding work too near the eyes strains them, and fosters a tendency to near-sight. For the youngest children, this distance should not be less than 25 cm. = 10 inches; for those of eight to ten years, 33 cm. = 14 inches. Badly proportioned desks and seats, especially where they are too far apart, favor this habit.

The eyes should have some rest from tasks every half hour. Fine embroidery, fine detail in map-drawing or penmanship, and the use of fine types, must be discouraged.

Such defects as far-sight, astigmatism, and affections of the muscles of the eye are rather common in school children; they often cause headache and other forms of illness. The remedy lies in the use of suitable glasses, as prescribed by physicians. Test-types may properly be used by teachers to ascertain what scholars have marked defects of sight.

SANITARY ADMINISTRATION OF SCHOOLS.

The duties comprised under this head may properly be entrusted to one man in small places; in large towns a division of work will be necessary. The officer upon whom the charge is laid—or in all cases, the chief officer—must be a well educated physician, with a special and practical knowledge of sanitary science. He should be appointed by the school authorities. He is here designated the medical school officer. It is the duty of this officer to satisfy himself (by personal inspection, if necessary) that all children admitted to school are protected either by successful vaccination, or a previous attack of the disease, against small-pox. He should also formulate and have

power to enforce, in conjunction with the state or municipal health officers, regulations to prevent the dissemination of infectious diseases through the schools.

All plans for school buildings, premises, and appliances should be submitted for his approval in sanitary points. Personally or by deputy he should examine all buildings and premises, with reference to the arrangements for ventilation and heating, size and lighting of rooms, furniture, water-closets, urinals, drains, plumbing, water-supply, safety from fire, and other points affecting health or safety. He should have the right of entrance at all times and should be armed with ample powers.

The medical school officer should give personal instruction to teachers, of a practical kind, embracing,—(1) an explanation of the existent sanitary regulations, with such physiological reasons and comments as may seem called for; (2) explanation of the sanitary arrangements existing in the schools, their practical management, and so much of the theory as may seem desirable; (3) explanation of the structure and use of the eye and other parts of the bodily frame, with remarks on food, clothing, recess, study, and kindred topics, so far as it seems to him desirable and useful to enter upon such considerations.

The said officer has medical authority in cases of immediate exigency, but is not authorized or expected to bestow further medical care as a part of his official duty. The extent to which personal medical inspection of scholars is made, and individual medical advice is given, must vary much with different classes of the population. It is not susceptible of extended adoption at present in America.

INFECTIOUS DISEASES.

PERIODS OF INCUBATION, QUARANTINE AND INFECTION, AND SOURCES OF INFECTION.

The following summary is condensed from Dr. L. F. Parkes's recent "Handbook of Infectious Diseases," and will be found very useful to boards of health and sanitary officials for reference, as well as to general practitioners of medicine:

DIPHTHERIA.

Incubation period: least, unknown; average, 2 days; greatest, 7 days.

Quarantine period: 7 days from last exposure to infection.

Infective period: from the beginning of symptoms, for the whole period of illness.

Sources of infection: 1. From a previous case, acute or convalescent. 2. From a case of apparently simple tonsilitis. 3. From a case of apparently simple nasal ulceration or ozæna. 4. From domestic animals (cats, pigeons, or fowls) suffering from a throat affection of a diphtherial nature. 5. From cows' milk, by human infection of the milk in cow-sheds and dairies, etc. 6. From fomites, that is, infected bedding, clothes, carpets, curtains, books, toys, cups, spoons, forks, etc. 7. From a person who has been in contact with a diphtheria patient, but who has not himself contracted the disease. 8. From defective sanitary conditions; these are probably merely predisposing causes engendering morbid conditions of the tonsils favorable to the growth of diphtheria contagion when implanted thereon.

SCARLET FEVER.

Incubation period: less than 24 hours; average, 1 to 3 days; greatest, 7 days.

Quarantine period: 7 days from last exposure.

Infective period: from earliest appearance of symptoms, till all desquamation has ceased.

Sources of infection: 1. From a previous case of scarlet-fever, acute or convalescent. 2. From a case of sore throat without discernible rash, but merely a mild form of the disease. 3. From cows' milk, either by human infection of the milk in cow-sheds and dairies, or during the milking, or from a diseased condition of the cows. 4. From fomites. Infection may be carried by persons who are not themselves sufferers, if they have been in contact with patients.

MEASLES.

Incubation period: From exposure to infection to onset of illness: least, 4 days; average, 9 to 10 days; greatest, 14 days. From exposure to infection to appearance of rash: least, 7 days; average, 14 days; greatest, 18 days.

Quarantine period: 15 days from last exposure to infection.

Infective period: from earliest appearance of symptoms till convalescence is well established. The catarrhal stage preceding the eruption is very infectious.

Sources of infection: 1. From a previous case of measles. 2, From fomites.

MUMPS.

Incubation period: least, 14 days; average, 21 days; greatest 25 days.

Quarantine period: 25 days from last exposure to infection

Infective period: from onset of prodromal stage for 2 or 3 weeks subsequent to appearance of parotitis. The chance of infection diminishes progressively from the onset of the disease.

Sources of infection: 1. From a previous case. 2. From fomites.

GERMAN MEASLES.

Incubation period: least, 5 days; average, 18 days; greatest, 21 days.

Quarantine period: 21 days from last exposure to infection.

Infective period: from onset of prodromal stage to cessation of desquamation.

Sources of infection; 1. From a previous case. 2. From fomites.

INFLUENZA.

Incubation period: less than 24 hours; average, 3 to 4 days; greatest, 5 days.

Quarantine period: 5 days from last exposure to infection.

Infective period: from earliest onset of symptoms till convalescence is well established.

Sources of infection: 1. From a previous case of influenza. 2. From fomites.

WHOOPING-COUGH.

Incubation period: least, 7 days; average, not determined; greatest, 21 days.

Quarantine period: 21 days from last exposure to infection.

Infective period: the whole period of illness from onset of earliest catarrhal symptoms.

Sources of infection: 1. From a previous case of whooping-cough. 2. From fomites.

SMALL-POX.

Incubation period: least, 9 days; average, 12 days; greatest, 15 days.

Quarantine period: 15 days from last exposure to infection.

Infective period: from the onset of initial symptoms till all scabs have been removed. The period of greatest infectivity is during the acute stage (vesicular and pustular). During the initial illness, and until the appearance of the rash, the liability to impart infection is not great.

Sources of infection: 1. From a previous case of small-pox. 2. From fomites. Infection can be carried by a person who has been in contact with a small-pox patient, but who is not himself a sufferer from the disease. 3. Proximity to a small-pox hospital containing numerous cases in the acute stage.

CHICKEN-POX.

Incubation period: least, 13 days; average, 14 days; greatest, 19 days.

Quarantine period: 19 days from last exposure to infection.

Infective period: from appearance of eruption till this has completely disappeared.

Sources of infection: 1. From a previous case. 2. From fomites. The infection may be carried by those who have been in contact with the disease.

TYPHOID FEVER.

Incubation period: least, 7 days; average, 12 to 14 days; greatest, 23 days.

Quarantine period: 23 days from last exposure to infection.

Infective period: the excreta are infectious through the whole course of the disease, and until convalescence has been established at least a fortnight.

Sources of infection: 1. From water, food, or air contaminated by the specific virus contained in the excretions of a typhoid-fever patient. 2. From fomites. Infection may exist for several weeks in infected clothing and bedding shielded from exposure to light and air.

TYPHUS FEVER.

Incubation period: average, 7 days.

Quarantine period: 14 days from last exposure to infection.

Infective period: from beginning of illness to convalescence.

Source of infection: From a previous case of the disease. Fresh air and free ventilation rapidly destroy the virulence of the contagion. Fomites probably do not propagate the contagion.

ASIATIC CHOLERA.

Incubation period: least, a few hours; average, 1 to 2 days; greatest, 10 days.

Quarantine period: 10 days from date of last exposure to infection.

Infective period: from earliest onset of symptoms till complete recovery.

Sources of infection: 1. From water, food, and air contaminated with the discharge of a person suffering from cholera. 2. From fomites. 3. There is reason to believe that the virus contained in the excreta at the time of leaving the body of a patient, and for a short period afterward, is in a less active condition and more easily destroyed by chemical agents than after such excreta have been exposed for a short time to contact with the air.—*Boston Medical and Surgical Journal.*

TYPHOID FEVER—CAUSATION AND PREVENTION.[1]

BY PROF. VICTOR C. VAUGHAN, M. D., ANN ARBOR, MICH.

Our country has recently been greatly agitated on account of its threatened invasion by that dreadful scourge, Asiatic cholera. With hearts full of pity, we have read the story of death which came to us day after day from the fairest city of Germany. Every ship which has sailed from the mouth of the Elbe since the middle of last August has been regarded as a possible carrier of a poison more subtile and dangerous than any known to the chemist. Anxiously have we scanned the morning papers, fearing each day to learn that the pestilence had alighted upon our shores. Millions of people have watched the work of the health authorities in New York harbor with blended hope and fear. I am sure that no citizen of this country has felt that the national and state authorities have been too zealous in their attempts to protect us from this plague. No one has complained of the amount of money spent. Every one has felt that no expenditure could be too large if made wisely and successfully. "Let everything be done that can be done, spare no necessary expense." These and similar words doubtless would have expressed the universal feeling in regard to this matter. To-day we all feel that the health authorities should not relax their vigilance, that the next congress should make all needful appropriations, and that every important port of entry should be well supplied with

[1]Read before the Iowa Public Health Association.

houses for the temporary detention of travellers, with isolation wards for suspects, with hospitals for the sick, and with disinfection stations for the destruction of the specific microbes. I say that we all feel that these things should be done, and if they are not done we are not worthy of the civilization of which we boast. We should demonstrate to the thousands whom we have invited to our celebration next year, that they may come with perfect safety and without prolonged and vexatious detention. All will admit that it would be a disgrace to us to invite the people of Europe to the World's fair and allow them to be robbed of their money and other valuables by thieves in New York or Chicago, and it would be a greater disgrace to allow these visitors to find among us a pestilence which might have been prevented.

These feelings concerning the necessity of continuing the good work in the prevention of Asiatic cholera is a healthful one, but I have come here to talk to you about the prevention of a scourge which is greater even than this. Typhoid fever is constantly with us, and yet there is no excuse for its existence save that which is found in our apathy and carelessness. The historian of the future will probably prove to the satisfaction of his readers that the civilization of the last years of the nineteenth century was not so advanced as we who are living now supposed it to to be, and one of the most potent evidences of this he will find in our death-rate from this disease.

Conservative sanitarians estimate the number of deaths from typhoid fever in this country annually at not less than forty thousand. The census of 1880 reports twenty-two thousand eight hundred and fifty-four deaths, adding to this forty per cent. which has generally been found necessary in order to make the number of reported deaths equivalent to that of actual deaths, we have thirty-one thousand nine hundred and ninety-five. Supposing that typhoid fever is proportionately to the population no less frequent

now than it was in 1880 (and there is no evidence that it is less frequent) the estimated number of deaths in this country from typhoid fever is more than forty-two thousand. I am sure, however, that the number is too small. In the census of 1880, twenty thousand two hundred and thirty-one deaths are attributed to malarial fever. I think that most physicians will agree with me that there can be no doubt that a large proportion of these were actually due to typhoid fever. Malarial fever has not been, in the northern states at least, a highly fatal disease. Just how many of these deaths reported as due to malaria were actually caused by typhoid no one can more than guess. I think, however, that at least fifty thousand deaths from typhoid fever occur in the United States annually. The cholera epidemic of 1873, the last which we have had, destroyed seven thousand three hundred and fifty-six lives. I think, therefore, that I will not be accused of exaggeration when I say that a greater plague than Asiatic cholera is constantly with us.

We have fifty thousand deaths annually from typhoid fever, and if we know how to prevent these deaths, why do we not do it? It is estimated that the life of the average adult is worth to the state one thousand dollars. If the young man from twenty to twenty-five years of age loses his life, it will cost one thousand to raise another up from the cradle to the same age; and I am sure that none of you that are engaged in the pleasurable occupation of raising a family of boys, will admit that it can be done so cheaply. But on this estimate this government is losing fifty thousand times one thousand or fifty million dollars annually in the deaths from typhoid fever, Suppose that some foreign foe should invade our territory and rob us of this amount of money: the clang of arms would be heard from the Atlantic to the Pacific, from the great lakes to the Gulf of Mexico, and the country would soon avenge itself. Suppose that some infectious disease should appear among our

domestic animals and destroy them to the extent of fifty million dollars' worth in one season: petition after petition would be addressed to the state legislatures asking for the appropriation of money to pay experts to ascertain some remedy for the evil, and one political party would vie with the other in doing what it could to relieve the distress and protect the property of the people. The lives of hogs, horses, and oxen are worth money; are the lives of American citizens worth nothing? This is not all that typhoid fever is costing us. For every death from this disease at least ten other people are sick with it. Five hundred thousand people who do not die are sick each year with typhoid fever. We will suppose that the average duration of the sickness is twenty-eight days, and all physicians will agree that this estimate is too small. The person who has typhoid fever is often unable to resume his vocation within a shorter time than three months. However, we will make our estimate on the supposition that the average time lost from work by the man sick with typhoid fever is twenty-eight days, then the aggregate of time lost each year by people sick with this disease amounts to five hundred thousand times twenty-eight days or fourteen million days, which is equivalent to more than thirty-eight thousand three hundred and sixty-six years. Suppose that the time of the individual is worth fifty cents per day, when he is well this represents an actual money loss of seven million dollars annually, and this should be doubled because for every person sick the time of another person who acts as a nurse is demanded. The fourteen million dollars added to the fifty million dollars which is lost by death makes a sum total of sixty-four million dollars or about one dollar for each inhabitant, the annual tribute levied upon this nation by one disease, typhoid fever. This represents approximately the amount which we pay every year for the ignorance and carelessness which we exercise in allowing this, a preventable disease, to prevail among us. Surely the sub-

ject of the restriction of disease is one well worthy of the study and intelligent thought of the political economist who values the welfare of his nation. In this estimate of the importance of this subject I have left out of consideration every question of sentiment.

We say that the life of the average adult is worth to the state one thousand dollars, but ask the father and mother the value of the life of that promising son or daughter just developed into full manhood or womanhood who has been cut off by this disease, and amidst their tears they will tell you that all the wealth of the world could not repair their loss.

Should some worthless vagabond waylay you as you leave the hall, knock you down, and rob you of money he would most probably be arrested and made to pay the full penalty of an offended law, but your Christian neighbor builds his cesspool or locates his privy vault in dangerous proximity to your well, poisons your drinking water, and causes one or more deaths in your family, and this is the civilization of which we boast.

I am not an alarmist, I am not a pessimist, but when I think of the fearful ravages which the preventable diseases cause among us I fear that we are yet far removed from real civilization, and that many generations must pass away before man realizes that he is his brother's keeper.

The prosperity and happiness of a nation are not correctly measured by its wealth, by the value of its agricultural products, by its exports and imports, by the number of immigrants which annually flock to its shores, nor even by its birth-rate, but by the length of life of its inhabitants. A wise statesman, Sir Francis d' Ivernois, justly observed nearly a century ago that " if the various states kept and published annually an exact account of their population, noting carefully in a second column the exact age at which its citizens die, this second column would show the relative merit of the governments and the comparative happiness of

their subjects. A simple arithmetical statement would then, perhaps, be more conclusive than all the arguments that could be addressed."

Judging by this standard, what can we say of the merit of our own government and the happiness of our people, when more than one fourth of the children born to us die before they reach five years of age, and more than eighty per cent. of our deaths are due to preventable causes?

I have said that typhoid fever is a preventable disease, and that the large number of deaths from the disease is unnecessary. This is true not only theoretically, but practical demonstrations are not wanting. Prior to 1859 the city of Munich, in Bavaria, was a veritable hot-bed of typhoid fever. There were no sewers and no public water-supply. Most of the houses were furnished with large brick or wooden flues which were built from the cellar up through the different floors. Into these the excretions from the body were dropped, and accumulated in the cellars. Other waste material was deposited in cesspools, and garbage was thrown into the back yards. The air in the houses was foul and offensive to the smell. The drinking water was taken from shallow wells in the yards, and these often received the ooze from the cesspools and vaults. In 1859 the citizens were compelled to cement tightly the bottoms and sides of these receptacles of filth, and later a system of sewerage was introduced, and later still a supply of wholesome water was obtained. Notwithstanding the fact that portions of the city still remained unsewered at the time of the last report, the results have been most gratifying as is shown by the following table given by Bollinger:

Typhoid deaths in the civil population of Munich per nine thousand inhabitants:

1852–'59	24.2	1880	6.4
1860–'67	15.6	1881	1.4
1868–'75	12.7	1882	1.9
1876	6.8	1883	1.9
1877–'79	7.8	1884	1.4

This shows what has been done in an old and crowded city, and Vienna has practically repeated the demonstrations made by Munich.

The number of deaths from typhoid fever in the United States is about eight per ten thousand. The reduction of this mortality to the same extent that has been actually accomplished in Munich would save in round numbers not less than forty thousand lives each year.

What is our government, national, state, and local, doing to prevent this great loss of life? The answer is not what it should be. The national authorities are doing absolutely nothing. In times of panic, when cholera or yellow-fever threatens to cripple commerce, the national authorities are driven into activity, but at other times nothing is done. Many of the states have central boards of health, but the support given them is, as a rule, most inadequate. You have here in Iowa a most excellent board of health, but I dare say, although I have no information on the subject, that the appropriation made by your legislature for the use of this board is by no means commensurate with the importance of its work. In Michigan, six members of the state board of health give a portion of their time to its work without charge, and the efficient secretary draws a salary of less than half the sum which many a physician of less ability is making in private practice, and although it can be demonstrated that this board saves the lives of more than a thousand citizens of the state annually, each legislature for a number of years past has had before it a bill to abolish the board, and more than one governor has recommended the same measure. Since the members of the board are not practical politicians and the cry of economy is popular, it seems to strike the average statesman that it is best to begin the prominent reform by cutting off the appropriation for the only state organization whose purpose is the prevention of disease.

Local health officers are often selected for the political

work which they have done and without regard to their fitness for the work. The pay which is given them is not enough to induce good men to seek the position, and the small amount given is, as a result of this system, practically thrown away.

What should be done? The national government should provide for a department or bureau of public health. There is a bureau of animal industry where some most excellent work has been done in the study of hog cholera. Why should not some attention be given to typhoid fever? This department should establish and equip a laboratory of practical hygiene, and the most expert bacteriologists and chemists in the country should be set to work to solve the problems connected with the causation and spread of the infectious diseases.

The marine hospital service should be furnished with every needed facility to carry on its good work in preventing the introduction of disease.

Each state should liberally support its board of health. This board should have a laboratory in which suspected water, contaminated, diseased, or adulterated food or drink of any kind, could be examined by men skilled in the work. When typhoid fever appears in any part of the state the board should be able to send a sanitary expert to that locality, and he should endeavor to ascertain the source of the disease, and be able to advise with the local authorities as to the best means of preventing its spread. I am convinced that such an expert would be of great value to the public health service of the state. But some one may say that the expense of such an officer would be considerable. This is true, but do we not do as much in case of disease among our domestic animals? Many states, at least, have a veterinarian who may be called to the most distant part of the state to decide whether or not a horse has glanders or a cow pleuro-pneumonia. Are the lives of men worth less than those of horses and cows?

The state board of health should also issue instructions to local health authorities, and should interpret statistics of sickness.

Every city of five thousand or more inhabitants should have a health officer who should devote his entire time to this work. He should guard the water-supply, inspect dairies, control the sale of milk, visit the markets daily and be authorized to condemn questionable food. He should placard houses where infectious diseases exist, and should have charge of the disinfection of such premises. He should see that streets, alleys, commons, and yards are kept clean. He should have the authority to inspect public and private houses and to abate sanitary nuisances whenever they are found to exist.

The house-to-house inspection which has recently been made in some cities has been a most ridiculous farce. Many of the men who have pretended to do this work are wholly unacquainted with the first principles of sanitary science. Few of them could give a trustworthy opinion as to the plumbing or ventilation of a building, and none of them have had any training as sanitary inspectors. The city treasury has been depleted by the sum of their salaries, and sanitation has been advanced, if at all, only in places where the accumulated filth was so great that it made its presence known to the community at large.

Every village and town should have its health officer whose duties should be similar to those mentioned, but whose time need not be given exclusively to the work.

When our health service is systematized in some such way as this, and when the people in general become better informed, and more thoroughly awakened to the necessity of constant vigilance, then the death-rate from typhoid fever will be much reduced.

Typhoid fever is a disease which is due to a germ which is comparatively well known to bacteriologists. Whether this germ always shows characteristic forms of growth or

not is a matter about which there are still some differences of opinion, but that this germ or class of germs is the active agent in the causation of the disease there is no doubt.

The typhoid bacillus must find its way into the intestines before it can produce the disease. It is, in the great majority of instances, carried into the body with food or drink. Some very eminent authorities will tell you that the germ is never contained in the inhaled air. To this statement I should object. I believe that this is an exceptional method, but I am confident that it does occasionally occur. It may happen whenever the air passes over or through dried fæcal matter containing the germ. Such was, I believe, the cause of an outbreak which occurred a few years ago in the Michigan penitentiary. The waste from the hospital on the fourth story of the main building descended to the ground through an iron soil-pipe, which emptied into a little sewer. The tile was laid in the ground a few inches under the floor. Branching off from the tile sewer was a tributary, also of tile, which had been laid with the intention of utilizing it to carry off the waste from the west ward, but this tributary had never been used. There was a man sick in the hospital with typhoid fever, and his discharges without being disinfected were thrown into the closet. The tile sewer under the floor was subsequently found to be broken in several places. The waste from the hospital containing the typhoid germs permeated the soil, which was warmed and dried by the heat of the building, and from this contaminated soil the air was drawn by the ventilation and heating of the building through this unused sewer pipe into the west ward, and it was among the men in this ward that the outbreak occurred. Disinfection of the soil with large quantities of corrosive sublimate, the removal of the broken sewer, its replacement with an iron pipe, and the closure of the unused sewer pipe were followed by an abrupt termination of the report of new cases.

I am rather insistent upon the possibility of the spread of the typhoid germ through the air, because I am convinced that the possibility of such means of dissemination is sometimes overlooked. There is another reason for the special mention of this point, and this is the custom prevalent in many places of drying the fæcal matter within the building by means of warm foul air as it is drawn into the exit flue. This method of disposing of the excretions of the human body has been adopted in many school-houses, and I believe that it is by no means devoid of danger. It is said by those who favor this method that the air of the rooms cannot become contaminated because it is constantly being drawn outward and there are never inward currents. In reply to this, I would say that there is no system of ventilation so perfect that counter currents are never formed by the opening of windows and doors. Fæcal matter should never be stored in inhabited buildings. It should be removed as speedily as possible. Currents of air will not take up germs from moist surfaces, but so soon as these masses of waste matter become dry there is danger of breathing the air which comes over or through them.

The discharges from typhoid patients should always be disinfected before they are thrown into water-closets or upon the surface of the ground. Masses of filth should not be allowed to accumulate in or about houses. Back yards, barns, and out-houses should be kept clean not only with the view of preventing the contamination of the drinking-water supply, but for preventing the contamination of the air also.

The majority of cases of typhoid fever arise from a contaminated water. That a drinking water infected with the discharges from a person sick with typhoid fever may cause an epidemic of the disease there can no longer be any doubt. The records of sanitary science abound in histories of such cases. Every physician of large experience with

this disease can detail one or more instances in which the disease has been clearly traced to infected water, and I will consider that this method of the dissemination of the disease is recognized by all. Some physicians will tell you that every case of typhoid fever is due to impure drinking water. I will not be so positive and will repeat that most cases are due to this cause. It probably is a safe estimate to say that bad drinking water causes forty thousand deaths every year in this country. "Actually," some one is ready to ask, "can this be true? Is our drinking water so frequently and so dangerously contaminated?"

We read that some of the inhabitants of India store their water-supply during the rainy season in open tanks and that during the dry season these tanks not only supply the drinking water but they serve as laundry and bath tubs as well. Dirty clothing and unclean bodies are washed in the same water which serves to quench their thirst. Yet this is true; but then these people are not the enlightened Christians which we claim to be. The official organ of the Imperial board of health of Germany calmly explains the outbreak of cholera at Hamburg last August in the following manner:

"The plague is most probably due to emigrants from Russia in this manner: The barracks used for the accommodation of these emigrants discharge their sewage, containing the waste from the laundry and the undisinfected fæces, into the Elbe near the intake of the water-supply for the city."

In other words, the people of Hamburg have for years been drinking the diluted excretions of the emigrants who have been housed in these barracks awaiting their departure for America. Surely the people of Hamburg cannot boast of their superiority over the heathen Hindoo.

But certainly we do better in this country. A few years ago the discharges from the body of a man sick with typhoid-fever were thrown upon the snow on the banks of the

stream supplying water to the city of Plymouth, Pa., and hundreds of cases of typhoid-fever resulted. Louisville drinks the diluted sewage of Cincinnati and other small cities, and pays for the privilege with a high death-rate from typhoid-fever. Chicago pours a part of her sewage into the same basin from which it takes its drinking water, and complains because the physicians report so many cases of typhoid-fever. The Iowa farmer with his many broad and fertile acres often locates privy vaults, cess-pools, pig-pens, and wells in close proximity, and demonstrates that he is not to be outdone by the inhabitant of the city in the amount of patronage which he bestows upon the undertaker. Men and women who would not sit at a table covered with a soiled cloth, drink from costly glasses the diluted discharges of some sick man. It is not pleasant to recite these details, but no one can deny their truth and with shame we must admit that we should not regard the Hindo as exceptionally filthy.

One must recognize his own faults, before he is likely to make any attempt to improve himself. If there were no way of remedying these grievous sins I would not have come here to talk to you to-night. I am sure that I could have chosen a topic which I could have discussed with more pleasure and which would have been more pleasant for you to hear. But believing as I do that the sanitarian has a gospel to preach second only to that of him who administers to man's moral nature, I have come here to urge upon each of you the necessity of your taking an active interest in these matters.

Like charity and all other good things your activity in sanitation should begin at home. See to it that cellars, back-yards, and out-houses are clean. If there be any doubt about the plumbing in your house being in perfect order, call in a competent man and remedy any defects which he may detect. If there be any suspicion in regard to the water-supply, boil the water which you drink. On the

whole, I think it best to boil the water anyhow, and then you may investigate its character afterward. Germs are more easily digested after they have been well cooked. See to the ventilation of your house. Do not take air from the cellar, heat it and bring it into the rooms for the inmates to breathe. Get the air from out-of-doors. The supply is more abundant there than elsewhere. Ascertain whether or not your milkman is diluting his milk, and if so, ask him to use sterilized water in the dilution. You may be willing to pay him seven cents per quart for water, but it is not unreasonable, if you are doing this, to ask him to inform you of the character of the water for which you are paying. After you have seen to these matters, inquire as to the work being done by your city health officer. Ascertain how much time and attention he is giving his work, and in this connection it would not be amiss to find out how much salary your city is paying him. What is the source of water-supply for your city? What are the possible sources of its contamination? It may be of great moment to you who is elected president on the 8th of November, but it is of vital interest that your family should not be compelled to drink a contaminated water.

Health and its companion, happiness, are the rewards which you may expect for the time spent in giving attention to the sanitation of your home and city.

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REPORT

OF THE

STATE TREASURER

OF THE

STATE OF NEW HAMPSHIRE

FOR THE YEAR ENDING

MAY 31, 1893.

VOLUME I. . . . . PART 4.

CONCORD:
EDWARD N. PEARSON, PUBLIC PRINTER.
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REPORT.

OFFICE OF STATE TREASURER,
CONCORD, June 1, 1893.

To the Honorable Senate and House of Representatives:

GENTLEMEN: I have the honor to submit the following report, exhibiting the transactions of this department for the fiscal year ending May 31, 1893:

ABSTRACT OF RECEIPTS AND DISBURSEMENTS.

RECEIPTS.

Cash on hand June 1, 1892	$345,219.11	
Total receipts during the year	1,718,461.74	
		$2,063,680.85

DISBURSEMENTS.

Total disbursements during the year . . .	$1,956,307.82	
Cash on hand June 1, 1893	107,373.03	
		$2,063,680.85

DEBT.

Liabilities June 1, 1892 .	$2,859,033.86	
Assets June 1, 1892 . .	707,129.97	
Net indebtedness June 1, 1892 . .		$2,151,903.89
Amount carried forward . . .		$2,151,903.89

Amount brought forward . . .		$2,151,903.89
Liabilities June 1, 1893 .	$2,600,861.77	
Assets June 1, 1893 . .	469,099.17	
Net indebtedness June 1, 1893 . .		$2,131,762.60
Reduction of debt during the year . .		$20,141.29

REVENUE AND EXPENSES.

The following statement exhibits the sources of the revenue and the nature of the expenses for the year 1892–'93:

REVENUE.

State tax	$500,000.00	
Railroad tax	128,809.85	
Insurance tax	16,585.64	
Interest on deposits . . .	3,354.43	
License fees (peddlers) . .	2,025.00	
License fees (fertilizers) . .	750.00	
Telegraph tax	2,891.92	
Telephone tax	2,088.28	
Charter fees	4,592.50	
Fees (insurance department) .	5,687.40	
Escheated estates . . .	5,486.30	
Board of registration dentistry (fees)	18.50	
Benjamin Thompson trust fund, profit and loss . . .	882.46	
Benjamin Thompson trust fund income for year ending January 30, 1893 . . .	18,010.85	
Benjamin Bilsborough, cash refunded	10.00	
Total revenue		$691,193.13

EXPENSES.

Ordinary expenses	$321,780.61	
Extraordinary expenses	193,378.60	
Interest	155,892.63	
Total expenses		$671,051.84
Excess of revenue over expenses *		$20,141.29

For convenience, expenses are divided into two classes, ordinary and extraordinary. Ordinary expenses include salaries and expenses whose payment is authorized by general laws, and which are of annual or biennial occurrence. During the past year they have been as follows, viz.:

ORDINARY EXPENSES.

Legislature (pay rolls senate and house)	$81,986.10
Salaries	62,574.54
Honorable council	3,676.96
State printing	31,958.67
Auditing printer's accounts	339.20
Increase state library	3,056.39
Trustees of normal school (expenses)	52.85
Clerks of supreme court	868.80
Support of indigent insane	6,000.00
Support of convict insane	4,215.18
Commissioners of lunacy	13,567.90
N. H. National guard	30,000.00
Bounty on wild animals, etc.	2,007.00
Fish commissioners	3,911.85
State house	4,783.30
Amount carried forward	$248,998.74

* Corresponding with reduction of debt, page 296.

Amount brought forward . . .	$248,998.74
Clerical expenses, treasury . . .	1,000.00
Industrial school	6,000.00
Board of agriculture	1,089.13
Board of equalization	400.35
Independent militia	400.00
Auditing treasurer's accounts . . .	200.00
Board of health	770.95
Bank commissioners	7,641.14
Clerk, adjutant-general's department . .	500.00
Clerk, superintendent public instruction .	500.00
Clerk, board of health	500.00
Clerk, insurance department . . .	1,000.00
Clerk, bank commissioners . . .	78.12
Deaf and dumb (education of) . . .	2,540.78
Blind (education of)	2,707.67
Idiotic and feeble-minded youth . . .	1,500.00
Normal school	7,000.00
Agricultural college	3,000.00
Compiling financial statistics . . .	200.00
N. H. Historical Society	500.00
Abstracts military records	99.55
Contagious diseases (cattle) . . .	3,097.37
Asylum library	100.00
Governor's contingent fund . . .	545.16
Engrossing clerk	311.50
Commissioner of immigration . . .	1,103.85
Insurance commissioner's office . . .	538.39
Commissioners of pharmacy . . .	584.44
Granite State Dairyman's association . .	500.00
Free public libraries	4,800.00
Library commissioners, ...	333.33
Amount carried forward . . .	$298,540.47

Amount brought forward . . .	$298,540.47
Trustees state library expenses, . . .	12.00
Board of registration dentistry . . .	18.50
War album	100.00
Benj. Thompson state trust fund* . .	3,000.00
Australian ballot	14,512.32
Presidential electors	85.40
Legislative manuals	635.00
Incidentals	4,876.92
Total ordinary expenses . . .	$321,780.61

Extraordinary expenses are those which are authorized by special acts of the legislature. For the past year they have been as follows, viz.:

EXTRAORDINARY EXPENSES.

Abatement of state tax, 1892 . . .	$101.20
Removal agricultural college . . .	75,000.00
Prisoners' Aid association	18.00
White Mountain roads	6,180.79
State prison (balance current expenses) .	2,061.94
State prison (repairs)	597.20
N. H. asylum (special appropriation) .	1,700.00
Indexing records (secretary) . . .	1,200.00
Prison library	248.20
Historian	1,980.31
State-house (special appropriation ventilation)	3,887.50
Sunapee lake (lights and buoys) . .	196.04
Amount carried forward . . .	$93,171.18

*Credited to fund.

Amount brought forward . . .	$93,171.18
Publication military records . . .	2,061.87
Boundary survey (Mass.)	163.05
Chicago exposition	16,359.83
Endicott rock (preservation of) . . .	168.69
Ashland hatching-house	539.00
Colebrook hatching-house	269.55
Soldiers' Home (net expenses) . . .	8,866.13
Legislative resolves	16,456.13
Lighting Weirs channel	109.00
Stark statue	2.00
Game detectives	87.75
Commission revising laws	2,000.00
State library building	52,263.50
Forestry commission	360.92
Gettysburg monument ("high water mark")	500.00
Total extraordinary expenses . .	$193,378.60

INTEREST.

There have been paid on account of interest the past year, or credited to the several trust funds, the following amounts, viz.:

Surplus revenue . . .	$60.57	
Fisk legacy, ...	1,582.70	
Kimball legacy	405.21	
Agricultural college fund . .	4,800.00	
Teachers' institute fund . .	3,307.26	
Coupons on bonds and interest on registered bonds . .	128,915.00	
Interest on state notes . .	706.85	
Benj. Thompson trust fund .	15,740.45	
Benj. Thompson state trust fund,	374.59	
Amount carried forward . . .		$155,892.63

Amount brought forward . . .		$155,892.63
The following have been received, viz.:		
Interest on deposits . . .	$3,354.43	
Income Benj. Thompson estate one year to Jan. 30, 1893 . .	18,010.85	
Total interest receipts		$21,365.28
Net interest		$134,527.35

PRINCIPAL OF STATE DEBT.

There have been paid during the year state bonds amounting to . . .	$277,400.00
State notes (temporary loan) . . .	100,000.00
	$377,400.00

TRUST FUNDS.

Trust funds are now as follows, viz.:

Fisk legacy	$26,378.43
Kimball legacy	6,753.49
Surplus revenue	1,009.44
Teachers' institute fund	56,502.91
Interest on surplus revenue . . .	2,208.73
Agricultural college fund . . .	80,000.00
Unclaimed savings-bank deposits . .	1,467.20
Benjamin Thompson trust fund . .	409,251.75
Benjamin Thompson state trust fund .	9,739.39
Total trust funds	$593,311.34

LITERARY FUND.

Receipts.

Balance June 1, 1892 . .	$5.52	
Non-resident savings-bank tax	78,670.34	
Amount carried forward . . .		$78,675.86

Amount brought forward . . .		$78,675.86

Disbursements.

Dividend to towns, one dollar and twenty-eight cents per scholar, as per table in appendix (pages 354–361) .	$78,426.88	
Balance to credit of the fund .	248.98	
		$78,675.86

TEACHERS' INSTITUTE FUND.

Balance June 1, 1892 . .	$55,121.00	
One year's interest at 6 per cent.	3,307.26	
		$58,428.26
Expenses of institutes, 1892–'93 . .		1,925.35
Balance June 1, 1893 . . .		$56,502.91

UNCLAIMED SAVINGS-BANK DEPOSITS.

Balance in treasury June 1, 1892 . .	$1,604.68
Paid during the year	137.48
Balance in treasury	$1,467.20

This amount is subject to the demand of the depositors, in accordance with the provisions of section 22, chapter 162 of the Public Statutes, and is reported in Trust Funds (page 301).

RAILROAD TAXES.

I reported June 1, 1892 (see Treasurer's Report for 1892, page 173), the sum of eleven hundred and eighty dollars and forty cents ($1,180.40) in the treasury on account of assessments of 1890 and 1891 upon the Man-

chester & Keene and Whitefield & Jefferson railroads, as due the towns on the lines of the two roads named.

This sum was apportioned to the towns entitled to the same, and paid over to them with the distribution of the railroad taxes of 1892, the statement of the account being as follows:

Railroad tax of 1892		$301,681.10
Manchester & Keene tax of 1890	$396.00	
Manchester & Keene tax of 1891	349.65	
Whitefield & Jefferson tax of 1891	434.75	
		$302,861.50
To towns, account tax of 1892	$172,871.25	
To towns, account tax of 1890	396.00	
To towns, account tax of 1891	784.40	
To revenue . . .	128,309.85	
		$302,861.50

THE BENJAMIN THOMPSON TRUST FUND.

The principal reported June 1, 1892, the same being the condition of the fund January 30, 1892, was	$393,511.30
One year's interest at 4 per cent. to January 30, 1893	15,740.45
New principal January 30, 1893, reported in trust funds (page 301) . . .	$409,251.75

THE BENJAMIN THOMPSON STATE TRUST FUND.

The principal reported June 1, 1892, the same being the condition of the fund January 30, 1892, was . . .	$6,364.80
Add appropriation January 30, 1893 .	3,000.00
	$9,364.80
One year's interest at 4 per cent. to January 30, 1893	374.59
New principal January 30, 1893, reported in trust funds (page 301) . . .	$9,739.39

The securities received from the executors remain in the treasury, none of them having been disposed of with the exception of one piece of real estate situated in Nottingham, which was appraised at $1,200, and sold as per following report of a committee of the honorable council, appointed for the purpose:

COUNCIL CHAMBER, CONCORD,
September 17, 1892.

To His Excellency the Governor and the Honorable Council:

The undersigned, a committee of the honorable council, appointed to sell and convey a certain tract of land in Nottingham acquired under the will of Benjamin Thompson, late of Durham, have attended to that duty, and submit the following report:

The tract was sold at public auction on the 24th day of May, 1892, pursuant to advertisement, to Henry A. Jones, of Pelham, N. H., for the sum of twenty-one hundred and seventy dollars ($2,170), of which sum 15 per cent., or $325.50, was paid at the time of sale; 35 per cent., or $759.50, within thirty days of sale, and the balance of $1,085.00, with $9.94 interest, was paid on delivery of the deed.

We have incurred the following expenses in the discharge of our duties, to wit:

Personal services and expenses	$25.00
Advertising	4.00
Amount carried forward	$29.00

Amount brought forward	$29.00
Counsel fees (making deed)	10.00
Auctioneer	48.54
Total expenses	$87.54

which have been paid from the proceeds of the sale, and have paid the balance of two thousand and ninety-two and 40-100 dollars ($2,092.40) to the state treasurer.

Respectfully submitted:

(Signed) JOHN M. WHIPPLE,
JAMES FARRINGTON,
Committee of Honorable Council.

This sum is accounted for as follows:

Real estate account closed at appraisal .	$1,200.00
Credited to profit and loss	882.46
Credited to income (interest)	9.94
	$2,092.40

The income of the Benjamin Thompson estate for the year ending January 30, 1893, was as follows:

INCOME ON BONDS.

Interest on	$19,000	Chi., Bur. & Qui.	7 % .	$1,330.00
"	8,000	"	4 % .	320.00
"	5,000	Chi., Mil. & St. P.	6 % .	300.00
"	6,000	"	5 % .	300.00
"	4,500	Wis. Valley	7 % .	315.00
"	1,500	Consol. R. R., Vt.,	5 % .	75.00
"	2,000	Central Pacific	6 % .	120.00
"	1,000	Oregon Navig'n	6 % .	60.00
"	2,500	So. Carolina	6 % .	150.00
"	2,000	Chicago	7 % .	140.00
"	500	Og. & L. Cham'n	6 % .	30.00
"	2,000	Or. S. L. & U. N.	5 % .	100.00
Total income on bonds . . .				$3,240.00

INCOME ON RAILROAD STOCKS.

Dividends on	100 shares	Port'd & Og'burgh .	$200.00
"	106 "	Fitchburg . .	424.00
"	56 "	Dover & Winn'ee .	336.00
Amount carried forward			$960.00

Amount brought forward				$960.00	
Dividends on	66	shares	Boston & Lowell .	462.00	
"	81	"	Mich'n Central .	445.50	
"	42	"	Vt. & Mass. . .	252.00	
"	172	"	Boston & Maine .	1,376.00	
"	87	"	Boston & Albany .	696.00	
"	66	"	Ill. Central . .	330.00	
"	310	"	N. Y. Cen. & H. R.	1.550.00	
"	900	"	Chi., Bur. & Qui. .	4,500.00	
Total income on railroad stocks . .				———	$10,571.50

INCOME ON MANUFACTURING STOCKS.

Dividends on	10	shares	Boston Belting Co. .	$100.00	
"	6	"	Cochecho M'f'g Co. .	120.00	
"	43	"	Great Falls M'f'g Co.	301.00	
Total income on manufacturing stocks .				———	$521.00

INCOME ON BANK STOCKS.

Dividends on	78	shares	Strafford National .	$780.00	
"	22	"	Suffolk " .	99.00	
"	13	"	North " .	78.00	
"	40	"	Tremont " .	200.00	
"	21	"	No. America " .	126.00	
"	10	"	City " .	20.00	
"	50	"	Merchants' " .	300.00	
"	9	"	Commerce " .	54.00	
"	12	"	Atlas " .	60.00	
"	10	"	Globe " .	44.00	
"	7	"	Newmarket " .		
Total income on bank stocks . .				———	$1,757.00

MISCELLANEOUS INCOME.

Interest on deposits	$776.59	
Chi., Bur. & Quincy rights (net) . .	630.00	
Boston Belting Co. " " . . .	275.25	
Boston Belting Co. (extra dividend) . .	200.00	
Interest on proceeds land sale . . .	9.94	
Received of E. R. Brown, executor, rebate of taxes, etc.	29.57	
Total miscellaneous income . . .	———	$1,921.35

RECAPITULATION.

Income on bonds	$3,240.00
" railroad stocks	10,571.50
" manufacturing stocks	521.00
" bank stocks	1,757.00
Miscellaneous income	1,921.35
Total income for year ending January 30, 1893	$18,010.85
Income of estate for year	$18,010.85
Real estate sold, appraised at	1,200.00
Gain on sale of land	882.46
Total cash receipts for year ending January 30, 1893	$20,093.31

In debt statement of June 1, 1892, I reported the securities of the Benjamin Thompson estate at the original appraisal,

Which was	$355,485.76
Real estate sold	1,200.00
Balance June 1, 1893, reported in assets (see page 334)	$354,285.76

SUMMARY.

The income of the estate from January 30, 1890, to January 30, 1892, two years, was	$38,547.50
The gain on farming utensils, appraised at $132.25, sold for $142.06	9.81
The gain on real estate, appraised at $1,200, sold for $2,082.46 net	882.46
Income for year ending January 30, 1893	18,010.85
	$57,450.62
The state was chargeable with interest on the fund for two years to January 30, 1892	$29,687.98
One year's interest to January 30, 1893	15,740.45
Total interest charges	$45,428.43
Excess of income and profit and loss over interest charges for the first three years of the twenty-year term of the trust	$12,022.19

SOLDIERS' HOME.

The following sums have been received from the United States on account of allowance for the support of the inmates of the New Hampshire Home for disabled soldiers:

Quarter ending June 30, 1892	$1,225.00
Quarter ending Sept. 30, 1892	1,175.00
Quarter ending Dec. 31, 1892, $1,350 less $230.75 pensions	1,119.25
Quarter ending March 31, 1893, $1,525 less $141, pensions	$1,384.00
Quarter ending June 30, 1891, balance	956.11
Total receipts	$5,859.36

The last item in above account was accounted for in the statement made June 1, 1892, being credited to the Home, and carried in state's assets as a claim against the United States.

The total expenditures on account of Soldiers' Home for the year ending May 31, 1893, have been		$13,769.38
Received from United States during year	$5,859.36	
Deduct item accounted for	956.11	
Net receipts for current year		4,903.25
Net expense of Home for year ending May 31, 1893		$8,866.13

BUILDING AND LOAN ASSOCIATIONS.

The sum of two hundred and fifty dollars and forty-three cents ($250.43) paid by the Laconia Building and

Loan Association on account of taxes for 1890, still remains in the treasury awaiting the action of the legislature. See statement of liabilities (page 334).

TAXES AND ASSESSMENTS.

The entire amount of the state tax for 1892 has been collected.

The assessments upon the railroad, telegraph, and telephone corporations, savings banks and trust companies, and local and foreign insurance companies have all been promptly paid, and the taxes on railroads, savings-banks, trust companies, and local (home) insurance companies apportioned to the cities and towns as required by statute.

DETAILED STATEMENT OF RECEIPTS AND DISBURSEMENTS.

RECEIPTS.

Cash in treasury June 1, 1892 . .	$345,219.11

STATE TAX OF 1892.

As per table in appendix (pages 354–361)	$500,000.00

INSURANCE TAX, 1892.

Foreign Life Insurance Companies.

Ætna	$395.54	
Connecticut General . . .	85.93	
Connecticut Mutual . . .	301.65	
Equitable Life Assurance Society	318.81	
Manhattan	36.08	
Massachusetts Mutual . . .	1,074.80	
Metropolitan	766.83	
Mutual Benefit	150.17	
Mutual	2,134.10	
National	359.80	
New England Mutual . . .	13.24	
New York	349.82	
Northwestern Mutual . . .	412.14	
Amounts carried forward	$6,398.91	$845,219.11

Amounts brought forward	$6,398.91	$845,219.11
Penn Mutual	265.01	
Phœnix Mutual	344.35	
Provident Savings	33.27	
State Mutual	124.48	
Travelers'	316.96	
Union Mutual	175.62	
United States	20.44	
Washington	18.90	
		$7,697.94

Foreign Fire Insurance Companies.

Ætna Insurance Co.	$285.27	
American of Boston, Mass.	37.18	
American Insurance Co. of Newark	15.08	
American Fire Insurance Co. of New York	122.51	
British American Assurance Co.	32.57	
Continental	87.09	
Caledonian Insurance Co.	19.12	
Commercial Union	113.00	
Dwelling House	24.47	
Fire Association of Philadelphia	46.93	
Fireman's Fund	80.28	
Fitchburg Mutual	182.46	
Guardian Assurance Co.	52.89	
Hamburg-Bremen	37.92	
Hartford Fire Insurance Co.	69.30	
Home	55.94	
Imperial Fire Insurance Co.	63.97	
Insurance Co. of North America	403.65	
Lancashire	59.99	
Liverpool and London and Globe	99.78	
Amounts carried forward	$1,889.40	$852,917.05

Amounts brought forward	$1,889.40	$852,917.05
London & Lancashire	128.92	
Massachusetts Mutual	81.43	
Manchester (Eng.)	70.04	
Merchants and Farmers' Mutual	30.69	
Mechanics and Traders'	48.11	
Mercantile Fire and Marine	41.36	
Michigan Fire and Marine	20.48	
National Fire Insurance Co.	74.21	
Niagara	64.76	
North British and Mercantile	74.51	
Northern Assurance Co.	87.89	
Norwich Union Fire Insurance Society	43.22	
Orient Insurance Co.	82.73	
Phenix Insurance Co., New York	135.02	
Phenix Insurance Co., Hartford	66.26	
Phenix Assurance Co.	99.27	
Pennsylvania Fire Insurance Co.	89.97	
Providence Washington	57.14	
Queen Insurance Co.	78.68	
Royal Insurance Co.	216.31	
Scottish Union and National	48.35	
Springfield Fire and Marine	93.68	
Sun Insurance Office	98.34	
Traders and Mechanics' Mutual	73.31	
United States	10.56	
Western Assurance	30.00	
		$3,839.64

Miscellaneous Foreign Insurance Companies.

American Employers' Liability	$4.21	
American Surety	14.32	
Amounts carried forward	$18.53	$856,756.69

Amounts brought forward .	$18.53	$856,756.69
Employers' Liability . . .	47.64	
American Casualty . . .	432.15	
Fidelity and Casualty . . .	40.25	
Guarantee Co. of North American	6.23	
Hartford Steam Boiler Insurance and Inspection Company . .	81.08	
Lloyd's Plate-Glass . . .	13.44	
Standard Life and Accident .	42.99	
		$682.31

Home Stock Insurance Companies.

Capital	$2,000.00	
Fire Underwriters' Association .	100.00	
Granite State	2,000.00	
New Hampshire . . .	7,000.00	
Peoples	3,500.00	
Portsmouth Fire Association .	500.00	
State Dwelling House . .	150.00	
		$15,250.00

SAVINGS-BANK TAX OF 1892.

As per table in appendix (pages 350–352) . $730,984.76

RAILROAD TAX OF 1892.

As per table in appendix (page 348) . . $301,681.10

TAX ON TELEGRAPH COMPANIES FOR 1892.

As per table in appendix (page 349) . . $2,891.92

TAX ON TELEPHONE COMPANIES FOR 1892.

As per table in appendix (page 349) . . $2,088.28

Amount carried forward . . $1,910,335.06

Amount brought forward . . .		$1,910,335.06

INTEREST.

Interest on deposits . . .	$3,354.43	
Income, Benjamin Thompson estate, one year to January 30, 1893	18,010.85	
		$21,365.28

FEES, INSURANCE DEPARTMENT.

John C. Linehan, commissioner . .	$5,687.40

EXPENSES OF RAILROAD COMMISSIONERS.

Assessment by board of equalization on railroad corporations for expenses of board from June 1, 1892, to June 1, 1893, as per table in appendix (page 348) . .	$5,468.99

LICENSE FEES, PEDLERS.

Rockingham county . . .	$300.00	
Strafford " . . .	50.00	
Merrimack " . . .	250.00	
Hillsborough " . . .	925.00	
Sullivan " . . .	50.00	
Grafton " . . .	50.00	
Coös " . . .	50.00	
Francis Lavine, No. 1 * . .	50.00	
Samuel Nickols, No. 2 * . .	50.00	
Anson L. Buzzell, No. 4 * .	50.00	
Nathaniel R. Greeley, No. 5 * .	50.00	
John P. Murphy, No. 6 * . .	50.00	
Harris Ross, No. 7 * . . .	50.00	
Edward Flanigan, No. 8 * . .	50.00	
		$2,025.00
Amount carried forward . .		$1,944,881.73

* Chapter 65, Laws of 1893.

Amount brought forward . .		$1,944,881.73

LICENSE FEES, FERTILIZERS.

Ames Fertilizer Co., license dated March 31, 1892 . . .	$50.00	
Allen Fertilizer Co., license dated April 22, 1892 . . .	50.00	
Bradley Fertilizer Co., license dated Nov. 17, 1892 . .	50.00	
Williams & Clark Fertilizer Co., license dated May 29, 1893 .	50.00	
Pacific Guano Co., license dated Dec. 17, 1892	50.00	
Clark's Cove Fertilizer Co., license dated Oct. 24, 1892 . .	50.00	
Cumberland Bone Co., license dated Oct. 20, 1892 . . .	50.00	
The Quinnipiac Co., license dated Feb. 1, 1893	50.00	
Cleveland Dryer Co., license dated Feb. 10, 1893	50.00	
Standard Fertilizer Co., license dated May 19, 1893 . .	50.00	
E. Frank Coe, license dated Feb. 4, 1893	50.00	
Ames Fertilizer Co., license dated March 31, 1893 . . .	50.00	
Bowker Fertilizer Co., license dated March 9, 1893 . .	50.00	
Crocker Fertilizer and Chemical Co., license dated May 3, 1893	50.00	
L. B. Darling Fertilizer Co., license dated April 1, 1893 .	50.00	
		$750.00
Amount carried forward . .		$1,945,631.73

Amount brought forward		$1,945,631.73

CHARTER FEES, CHARTERED CORPORATIONS.

People's Light and Power Co.	$50.00	
Brookline & Milford Railroad	100.00	
Consolidated Light and Power Co.	25.00	
Glen Manufacturing Co.	50.00	
New Hampshire Savings Bank	25.00	
French Pond Granite Railway Co.	25.00	
Union Electric Co.	50.00	
Woodsville Loan and Banking Co.	30.00	
Mutual Express Co.	25.00	
Dover Coöperative Bank	25.00	
Black Mountain Railroad	20.00	
Derryfield Savings Bank and Trust Co.	25.00	
Hudson Water Works	50.00	
Excelsior Fibre Co.	25.00	
Merchants' Guaranty Savings Bank	100.00	
Mt. Prospect Turnpike and Hotel Co.	50.00	
Simms Stream Valley Railway Co.	25.00	
Lancaster Fire Association	25.00	
Whitefield Aqueduct Co.	25.00	
Wolfeborough Junction Water Co.	50.00	
Claremont Guaranty Savings Bank	100.00	
Contoocook River Navigation and Improvement Co.	50.00	
Bristol Savings Bank	25.00	
Amounts carried forward	$975.00	$1,945,631.73

Amounts brought forward	$975.00	$1,945,631.73
Exeter Banking Co.	25.00	
Mercantile Insurance Co.	25.00	
Ashland Water Works Co.	50.00	
New Hampshire Trust Co.	25.00	
Rye Beach Electric or Horse Railroad	25.00	
Woodsville Manufacturing Co.	50.00	
Mascoma Light, Heat, and Power Co.	25.00	
Electric Meter and Motor Co.	25.00	
North Eastern Mutual Life Insurance Co.	50.00	
Dartmouth Bank	50.00	
Derryfield Savings Bank and Trust Co.	50.00	
Newmarket Water Works	50.00	
Granite State Trust Co.	25.00	
Charles Wilder Manufacturing Co.	50.00	
Laconia and Lakeport Street Railway Co.	25.00	
Upper Ammonoosuc Railroad Co.	50.00	
Worcester, Nashua & Rochester Railroad	25.00	
Pemigewassett Manufacturing Co.	50.00	
Claremont Electric Light Co.	25.00	
Warner and Kearsarge Road Co.	25.00	
Concord & Portsmouth Railroad	25.00	
Manchester & North Weare Railroad	50.00	
Bristol Street Railway Co.	37.50	
Amounts carried forward	$1,812.50	$1,945,631.73

Amounts brought forward	$1,812.50	$1,945,631.73
Franklin & Tilton Railroad	25.00	
F. M. Hoyt Shoe Company	25.00	
Elliott Manufacturing Co.	25.00	
North Conway & Mt. Kearsarge Railroad Co.	25.00	
Windsor & Forest Line R. R.	25.00	
Concord Street Railway	25.00	
Bartlett Water Co.	50.00	
Hanover Water Works Co.	50.00	
Eastern Fire Insurance Co. of New Hampshire	100.00	
Capital Fire Insurance Co.	25.00	
Francestown Water Co.	50.00	
Bennington Water Works Co.	50.00	
Northumberland Water Co.	50.00	
Long and Otter Lakes Railroad Improvement Co.	200.00	
Mascot Water and Electric Supply Co.	50.00	
Dover Banking and Trust Co.	25.00	
Keene Electric Railway Co.	25.00	
Belmont Aqueduct Co.	50.00	
Cascade Electric Light and Power Co.	50.00	
Gardner Cable Co.	50.00	
Black River Railroad Co.	50.00	
Antrim Loan and Banking Co.	100.00	
Antrim Savings Bank	100.00	
Ossipee Valley Railroad Co.	100.00	
Peterborough Electric Light, Power, and Heat Co.	50.00	
Amounts carried forward	$3,187.50	$1,945,631.73

Amounts brought forward	$3,187.50	$1,945,631.73
General Miller Park Railroad Association	25.00	
Mascoma Electric Light and Gas Co.	25.00	
		$3,237.50

CHARTER FEES, VOLUNTARY CORPORATIONS.

The Woodworth Mason Co.	$95.00	
The Boston District Messenger Co.	100.00	
The Reynolds Loan Co.	10.00	
William H. Sawyer Lumber Co.	1,150.00	
		$1,355.00

STATE NOTES.

Temporary loan	$100,000.00

SOLDIERS' HOME.

The United States (support of home)	$5,859.36

ESCHEATED ESTATES.

Mary A. Boynton, adm'x estate of Arthur Phillips, late of East Jaffrey	$3,315.23	
Charles E. Batchelder, adm'r estate of John Collins, late of Greenland	2,171.07	
		$5,486.30

BOARD OF REGISTRATION, DENTISTRY.

Edwrad B. Davis, secretary (fees)	$18.50
Amount carried forward	$2,061,588.39

Amount brought forward . .		$2,061,588.39

BENJAMIN THOMPSON ESTATE.

Real estate sold, appraised at .	$1,200.00	
Profit and loss, gain on real estate sold	882.46	
		$2,082.46

MISCELLANEOUS REVENUE.

Benjamin Bilsborough *	$10.00
Total receipts	$2,063,680.85

DISBURSEMENTS.

EXECUTIVE DEPARTMENT.

Governor's salary . . .	$2,000.00	
Honorable council . . .	3,676.96	
Printing blanks, etc. . .	275.62	
Governor's message . . .	97.35	
Incidental expenses . . .	812.99	
Doorkeeper to governor and council	347.80	
Contingent fund . . .	545.16	
		$7,755.88

SECRETARY'S DEPARTMENT.

Salary of secretary . . .	$800.00	
Salary of deputy secretary .	700.00	
Amounts carried forward	$1,500.00	$7,755.88

* Chapter 127, Pamphlet Laws of 1893, appropriated eighteen and ninety-five hundredths dollars ($18.95) to Benjamin Bilsborough. This amount was charged up and the governor's warrant drawn for the amount named in the act. Subsequently Mr. Bilsborough stated that his claim was only eight and ninety-five hundredths dollars ($8.95), and refunded the balance as above.

Amounts brought forward	$1,500.00	$7,755.88
Indexing records (special appropriation)	1,200.00	
Printing blanks, etc.	1,706.50	
Printing report	74.45	
Incidentals	974.27	
		$5,455.22

TREASURY DEPARTMENT.

Salary of treasurer	$1,800.00	
Salary of deputy treasurer	1,200.00	
Clerical expenses	1,000.00	
Printing report	497.81	
Printing blanks	114.86	
Auditing treasurer's accounts	200.00	
Incidentals	331.24	
Compiling financial statistics	200.00	
		$5,343.91

ADJUTANT-GENERAL'S DEPARTMENT.

Salary of adjutant-general	$1,000.00	
Printing report	346.35	
Printing blanks	211.50	
Clerk	500.00	
Incidentals	199.29	
Publication military records	2,061.87	
		$4,319.01

DEPARTMENT OF PUBLIC INSTRUCTION.*

Salary of superintendent	$2,500.00	
Clerk	500.00	
Printing report	1,107.62	
Amounts carried forward	$4,107.62	$22,874.02

* For expenses teachers' institutes, see Miscellaneous Items, page 333.

Amounts brought forward	$4,107.62	$22,874.02
Printing blanks, etc.	851.10	
Incidentals	293.85	
		$5,252.57

INSURANCE DEPARTMENT.

Salary of commissioner	$2,000.00	
Printing report	1,508.07	
Printing blanks	449.73	
Incidentals	520.96	
Office expenses	538.39	
Clerk	1,000.00	
		$6,017.15

SUPREME COURT.

Salary of justices	$23,300.00	
Salary of attorney-general	2,847.22	
Salary of state reporter	1,000.00	
Clerks of supreme court	868.80	
Incidentals	552.30	
Incidentals (reporter)	69.90	
		$28,638.22

PROBATE COURT.

Salaries of judges	$5,900.00	
Salaries of registers	6,900.00	
		$12,800.00

STATE LIBRARY.

Salary of librarian	$1,078.32	
Assistants	404.00	
Increase library	3,056.39	
Amounts carried forward	$4,538.71	$75,581.96

Amounts brought forward	$4,538.71	$75,581.96
Printing report	859.35	
Printing blanks	308.78	
Incidentals	209.73	
Expenses trustees	12.00	
Printing extra reports	99.56	
		$6,028.13

STATE HOUSE.

Salary of janitor	$650.00	
Watchmen	1,300.00	
Gas	955.20	
Water	187.50	
Fuel	1,152.94	
Furniture	345.08	
Repairs	812.97	
Miscellaneous	1,329.61	
Repairs (ventilation)	3,887.50	
		$10,620.80

NEW HAMPSHIRE ASYLUM FOR THE INSANE.

Support of indigent insane	$6,000.00	
Support of convict insane	4,215.18	
Special appropriation (balance)	1,700.00	
Printing report	465.76	
Library	100.00	
		$12,480.94

EDUCATION OF DEAF AND DUMB.

American Asylum, Hartford	$1,174.38	
Clark Institution, Northampton	1,225,00	
City of Boston (Horace Mann School)	141.40	
		$2,540.78
Amount carried forward		$107,252.61

Amount brought forward . . .		$107,252.61

EDUCATION OF THE BLIND.

Perkins Institution, Boston .	$2,700.00	
Isabel Greeley (O'Neil child) .	7.67	
		$2,707.67

INDUSTRIAL SCHOOL.

Current expenses . . .	$6,000.00	
Printing reports (2) . . .	469.89	
Printing blanks . . .	19.45	
		$6,489.34

STATE PRISON.

Salary of warden . . .	$1,500.00	
Salary of chaplain . . .	800.00	
Prisoners' Aid Association . .	18.00	
Printing report	166.92	
Printing blanks	87.33	
Balance current expenses . .	2,061.94	
Repairs (special appropriation) .	597.20	
Prison library	248.20	
		$5,479.59

NEW HAMPSHIRE COLLEGE OF AGRICULTURE AND THE MECHANIC ARTS.

Appropriation	$3,000.00	
Removal	75,000.00	
		$78,000.00
Amount carried forward . . .		$199,929.21

Amount brought forward . . .		$199,929.21

NORMAL SCHOOL.

Annual appropriation . .	$7,000.00	
Expenses of trustees . .	52.85	
Printing report . . .	110.85	
Printing blanks . . .	301.82	
		$7,465.52

FISH COMMISSIONERS.

Expenses of commissioners .	$3,911.85	
Printing report . . .	233.36	
Printing blanks . . .	5.00	
Ashland hatching-house (special appropriation) . .	539.00	
Colebrook hatching-house (special appropriation) . .	269.55	
Game detectives . . .	87.75	
		$5,046.51

RAILROAD COMMISSIONERS.

Salaries and expenses of board *	$7,440.38	
Printing blanks . . .	12.32	
Printing reports (2) . .	2,205.86	
		$9,658.56

BANK COMMISSIONERS.

Printing report . . .	$2,088.23	
Printing blanks . . .	172.93	
Amounts carried forward	$2,261.16	$222,099.80

*This item is not included in statement of expenses, but is reported in assets as a claim upon the railroad corporations. (See chapter 165, section 7, Public Statutes.)

Amounts brought forward	$2,261.16	$222,099.80
Compensation, etc.	7,641.14	
Incidentals	171.72	
Clerk	78.12	
		$10,152.14

NEW HAMPSHIRE NATIONAL GUARD.

N. H. National Guard (regular appropriation)	$30,000.00

BOARD OF AGRICULTURE.

Salary of secretary	$1,500.00	
Expenses of board	1,089.13	
Printing reports (2)	2,226.63	
Printing blanks, etc.	143.86	
Incidentals	246.88	
		$5,206.50

WHITE MOUNTAIN ROADS.

Woodstock and Warren	$200.00	
Sandwich Notch, Thornton	75.00	
Sandwich Notch, Sandwich	253.30	
Dummer	150.00	
Dixville	200.00	
Randolph	350.00	
Town of Washington,	150.00	
Errol to Dummer	200.00	
Errol Dam to Wentworth's Location	200.00	
Wentworth's Location	75.00	
Millsfield	148.92	
Amounts carried forward	$2,002.22	$267,458.44

Amounts brought forward	$2,002.22	$26,7458.44
Willey and Bartlett . .	265.99	
North and south road, Benton	150.00	
Town of Canaan . . .	500.00	
Cherry Mountain, Carroll .	412.63	
Cherry Mountain, Jefferson .	296.00	
Crawford and Willey . .	600.00	
Crawford and Fabyan . .	303.95	
Hampton Beach road, H. M. Lane, agent . . .	1,500.00	
Town of Bridgewater . .	150.00	
		$6,180.79

ABATEMENT STATE TAXES, 1892.

Green's Grant	$101.20

BOARD OF EQUALIZATION.

Salary of secretary . .	$600.00	
Expenses of board . . .	400.35	
Printing report . . .	170.56	
Printing blanks . . .	17.91	
Incidentals	6.50	
		$1,195.32

BOUNTY ON WILD ANIMALS, ETC.

Bounty on 200 bears, at $10 .	$2,000.00	
Bounty on 7 wild cats . .	7.00	
		$2,007.00

STATE BOARD OF HEALTH.

Salary of secretary . .	$2,500.00	
Clerk	500.00	
Amounts carried forward	$3,000.00	$276,942.75

Amounts brought forward	$3,000.00	$276,942.75
Expenses of board	770.95	
Incidentals	469.19	
Printing report	1,636.36	
Printing report, registration	1,144.84	
Printing blanks, registration	348.38	
Printing blanks	502.36	
		$7,872.08

STATE HISTORIAN.

Compensation	$1,980.31	
Incidentals	8.30	
Printing Vol. XIX state papers	1,585.52	
Printing Vol. XX state papers	1,802.81	
Printing blanks	36.47	
		$5,413.41

LEGISLATURE.

Pay-roll of senate	$5,459.50	
Pay-roll of house of representatives	76,526.60	
Senate manuals*	75.00	
Clerk of house (part)	275.00	
Engrossing clerk	311.50	
Sergeant-at-arms, doorkeepers, and pages*	3,258.30	
Newspapers*	3,338.80	
Contested elections*	1,792.20	
Printing bills, etc.	1,728.41	
Chaplain*	311.50	
Amounts carried forward	$93,076.81	$290,228.24

* By joint resolution.

Amounts brought forward	$93,076.81	$290,228.24
Extra services of janitor and assistants*	900.00	
Clerks of house and senate*	1,675.00	
Stationery*	493.74	
Reporters*	1,200.00	
Incidentals	9.80	
Employés*	654.30	
Engrossing clerk*	125.00	
Manuals and maps*	852.00	
Printing manuals	2,999.42	
Printing consolidated reports	1,469.73	
Printing blanks	381.70	
Furniture senate chamber and sergeant-at-arms room*	627.49	
		$104,464.99

COMMISSIONERS OF LUNACY.

Printing report	$379.23	
Printing blanks	32.92	
Expense of commission	988.37	
Maintenance of insane	12,579.53	
		$13,980.05

COMMISSIONERS OF PHARMACY.

Printing blanks	$19.76	
Expenses of commissioners	584.44	
		$604.20

COMMISSIONER OF IMMIGRATION.

Expenses of commissioner	$1,103.85
Amount carried forward	$410,381.33

* By joint resolution.

Amount brought forward . . .		$410,381.33

FORESTRY COMMISSION.

Expenses of commission .	$360.92	
Printing report . . .	427.83	
		$788.75

COMMISSION ON REVISION OF LAWS.

Commissioners' compensation . . .		$2,000.00

STEAMBOAT INSPECTOR.

Printing blanks		$51.20

AUSTRALIAN BALLOT.

Ballot boxes	$9,800.00	
Printing ballots . . .	2,948.92	
Ezra S. Stearns . . .	890.00	
Postage	95.00	
Expressage	209.39	
Packing boxes . . .	78.44	
Miscellaneous printing . .	490.57	
Envelopes	4.40	
		$14,516.72

LIBRARY COMMISSION.

Expenses of commissioners .	$333.33	
Free public libraries . .	4,800.00	
		$5,133.33

ENDICOTT ROCK (PRESERVATION OF).

Balance appropriation . .	$168.69	
Appropriation* . . .	1,370.00	
		$1,538.69
Amount carried forward . . .		$434,410.02

* By joint resolution.

Amount brought forward . . .		$434,410.02

CONTAGIOUS DISEASES (CATTLE).

Sundry bills approved by cattle commissioners . . .	$3,097.37	
S. S. Warren* (glandered horse)	20.00	
		$3,117.37

BOARD OF REGISTRATION (DENTISTRY).

Expenses	$18.50

INDEPENDENT MILITIA.

Amoskeag Veterans . .	$100.00	
Manchester War Veterans .	100.00	
Manchester Cadets . .	100.00	
Lafayette Artillery Co. . .	100.00	
		$400.00

SOLDIERS' HOME.

Bills for the year †	$13,769.38

STATE LIBRARY BUILDING.

Construction, etc., for year . . .	$52,263.50

CHICAGO EXPOSITION.

Expense for year	$16,359.83

INSURANCE TAX OF 1892.

To towns as per table in Appendix, pages 354–361	$10,884.25
Amount carried forward . . .	$531,222.85

* By joint resolution. † See remarks, page 308.

Amount brought forward . . .		$531,222.85

RAILROAD TAX OF 1892.

To towns as per table in Appendix, pages 354–361		$174,051.65

SAVINGS-BANK TAX OF 1892.

To towns as per table in Appendix, pages 354–361 .	$652,314.42	
To literary fund . . .	78,670.34	
		$730,984.76

PRINCIPAL OF DEBT.

Bonds, mun. war loan series 1872, due Jan. 1, 1892 .	$6,900.00	
Bonds, mun. war loan series 1872, due Jan. 1, 1893 .	170,500.00	
State note (temporary loan) .	100,000.00	
Bonds, series 1879, due July 1, 1892	100,000.00	
		$377,400.00

INTEREST.

Interest on Fisk legacy . .	$1,582.70	
Interest on surplus revenue .	11.73	
Interest on Kimball legacy .	405.21	
Coupons on bonds, and interest on registered bonds .	128,915.00	
Interest on Agricultural college fund	4,800.00	
Interest on state notes . .	706.85	
		$136,421.49
Amount carried forward . .		$1,950,080.75

Amount brought forward . . . $1,950,080.75

MISCELLANEOUS.

Commissary-general . .	$20.00	
Idiotic and feeble-minded .	1,500.00	
Auditing printer's accounts .	339.20	
Teachers' institutes . .	1,925.35	
War album	100.00	
Abstracts military records .	99.55	
Presidential electors . .	85.40	
N. H. Historical Society .	500.00	
Alonzo Allen (bounty) .	50.00	
Sunapee Lake, lights and buoys	196.04	
Lighting Weirs Channel .	109.00	
Stark statue	2.00	
Unclaimed savings-bank deposits	137.48	
Granite State Dairymen's Association . . .	500.00	
Boundary survey (Mass.) .	163.05	
Gettysburg Monument, High Water Mark . . .	500.00	
		$6,227.07
Total disbursements . . .		$1,956,307.82

FUNDED DEBT.

The bonds now outstanding and dates of their maturity are as follows:

Municipal war loan, series of 1872, due Jan. 1, 1892, overdue	$2,200.00
Amount carried forward . . .	$2,200.00

Amount brought forward . . .	$2,200.00
Due Jan. 1, 1893, overdue, . . .	3,500.00
Due Jan. 1, 1894, to Jan. 1, 1905 . .	1,826,000.00
Total municipal war loan outstanding	$1,831,700.00
Bond, series 1873, due July 1, 1879, overdue	500.00
Bonds, library loan, due July 1, 1911 .	175,000.00
Total funded debt	$2,007,200.00

STATE OF THE TREASURY JUNE 1, 1893.

LIABILITIES.

Floating debt	$100.00
Trust funds (see items page 301) . .	593,311.34
Funded debt (as above)	2,007,200.00
Building and Loan Association tax * .	250.43
Total liabilities	$2,600,861.77

ASSETS.

Cash on hand June 1, 1893 . . .	$107,373.03
Benjamin Thompson estate, securities at appraisal (see remarks page 307). .	354,285.76
Due from railroad corporations for expenses of railroad commission for year ending May 31, 1893 (chapter 155, Public Statutes)	7,440.38
Total assets June 1, 1893 . . .	$469,099.17
Deficiency, being net indebtedness June 1, 1893	$2,131,762.60

* See remarks page 309.

DEPOSITS BY RAILROAD CORPORATIONS FOR LAND DAMAGES.

The treasurer reported a balance in his hands June 1, 1892, of $3,306.50

The transactions during the year have been as follows:

1892.

Sept. 19.	Received of the Whitefield & Jefferson Railroad, for following parties:		
	The C. S. Peabody Co., Gorham .		$350.00
	Elihu Libby & Sons, " .		181.00
	Albert A. Carter, " .		250.00
	Winona Paper Co., " .		100.00
	Cross heirs, " .		200.00
	Betsey Moulton, Jefferson . .		275.00
	Ethan A. Crawford, " . .		40.00
	John R. Horn, Berlin . . .		1,212.50
	G. W. & M. W. Libby . .		12.50
	Orange S. Phelps, Randolph .		100.00
	Fred Messenger, " . .		99.00
	Total receipts		$6,126.50

The following sums have been paid:

1893.

March 7.	Elihu Libby & Sons .	$181.00	
28.	C. S. Peabody Co. .	350.00	
	Total payments		$531.00
	Balance in treasurer's hands June 1, 1893		$5,595.50

FINANCES.

The treasury, for the first time in recent years, is seriously embarrassed by the legislation of 1889 postponing the payment of savings-bank taxes from June 15 to October 1. The close of the present fiscal year finds the treasury with a balance of but little more than $100,000, and with demands upon it which will exhaust the available cash before the first of July, necessitating a resort to temporary loans to provide for the payment of interest due July 1, and for current expenses to October 1. The experiment is liable to cost the treasury $10,000 the coming year, without corresponding benefit to the banks.

The change from June to January sessions of the legislature still further adds to the embarrassment, as the appropriations made at each session are practically all called for before the revenues for the year are available.

Is it wise to continue the policy of forcing the treasury to be a borrower for six months every year, subject to the varying conditions of the money market?

RETROSPECTIVE.

In submitting this my twentieth (eighteenth consecutive) annual report of the transactions of this department, I avail myself of the opportunity to present a comparative statement of the condition of the treasury when I assumed the duties of treasurer and its condition to-day, together with statistics which will exhibit in part what has been accomplished in a little more than two decades.

STATE DEBT.

State debt June 1, 1872	$4,138,124.26
State debt June 1, 1893	2,131,762.60
Reduction of debt	$2,006,361.66

Included in the debt statement June 1, 1872, were,—

Bonds, series 1861	$709,200.00
Bonds, series 1864	600,000.00
Bonds, series 1866	716,500.00
Amounting to	$2,025,700.00

all of which have been paid.

Two series of refunding bonds have been issued, as follows:

Series of 1873, 6%	$500,000.00
Series of 1879, 5%	500,000.00
Also prison loan bonds issued in 1879, amounting to	140,000.00
Making a total of	$1,140,000.00

All of which, with the exception of one piece of $500, have been paid.

Municipal war loan bonds (so styled) were issued January 1, 1872, amounting to	$2,205,695.44
Subsequently issued	404.56
Total issue	$2,206,100.00
Matured and paid	374,400.00
Outstanding June 1, 1893	$1,831,700.00

The only new issue of bonds at present outstanding is the library loan, 4%, maturing July 1, 1911	$175,000.00

INTEREST CHARGES.

The interest charge for the fiscal year ending May 31, 1873, was . . .	$251,903.33
For year ending May 31, 1893 . .	155,892.63
Reduction of annual interest charge .	$96,010.70

STATE INSTITUTIONS.

During the twenty-one years under consideration, the state has expended the following sums for her public institutions, to wit:

New state prison	$234,973.06
Normal School building	70,998.96
Soldiers' Home and maintenance . .	72,054.64
N. H. Asylum (improvements) . .	38,000.00
Industrial School " . . .	13,600.00
New Library building	130,685.48
Removal Agricultural college . . .	100,000.00
	$660,312.14

MISCELLANEOUS APPROPRIATIONS.

In addition to the foregoing expenditures the following items are among the most important appropriations, the greater part of which are entirely outside the ordinary state expenses:

Commissioners of lunacy	$48,453.97
Boundary survey (Mass.)	15,768.02
Philadelphia Centennial	13,350.54
Bennington Centennial, monument and dedication of same	11,000.00
Stark statue	10,269.32
Webster statue (dedication of)	2,257.32
Publication of military records	15,092.85
Constitutional Centennial (N. Y.)	1,406.11
Chicago exposition	17,251.53
Gettysburg monuments	4,500.00
Indexing records (secretary)	10,084.49
Indexing records (treasury)	2,683.33
N. H. Veterans' association	7,500.00
Geological survey, from 1872 to date *	53,033.04
Provincial and state papers, 1872 to date †	48,073.60
	$260,724.12

SAVINGS-BANK TAXES.

The amount of savings-bank taxes, from 1872 to 1892, has been as follows:

1872	$246,546.71
1873	276,215.73
1874	283,663.09
1875	293,750.42
1876	304,249.54
1877	303,183.21
1878	270,709.19
1879	263,054.81
1880	282,939.28
Amount carried forward	$2,524,311.98

* Total expense to date, $65,533.82. † Total expense to date, $64,350.50.

Amount brought forward . . .	$2,524,311.98
1881	317,878.32
1882	356,038.82
1883	387,334.15
1884	416,861.32
1885	434,026.64
1886	469,747.21
1887	505,129.97
1888	539,029.34
1889	577,385.77
1890	642,312.45
1891	698,799.16
1892	730,984.76
Total	$8,599,839.89

This has been collected, apportioned, and paid to the cities and towns, and it will be observed that the tax has more than trebled in the period covered by above statement, and the labor of caring for it correspondingly increased.

The following statement exhibits the cash transactions of the treasury department for the period of twenty years, and the expenses of the department for the same term, including salaries, printing, postage, stationery, express charges, and auditing the treasurer's accounts, and the sum of $2,683.33 for indexing old records:

Year.	Receipts.	Disbursements.	Expenses.
1872–3	$1,156,055.94	$1,097,503.29	$2,577.29
1873–4	1,740,358.96	1,525,878.05	3,023.72
1874–5 *			
1875–6	890,903.80	886,624.51	2,274.44
1876-7	900,181.03	911,884.42	2,319.35
1877–8	922,243.48	934,744.15	2,492.19

* Josiah G. Dearborn's term.

Year.	Receipts.	Disbursements.	Expenses.
1878–9	$1,159,767.01	$1,109,347.20	$2,470.16
1879–0	1,202,838.17	1,150,324.57	2,488.05
1880–1	1,000,758.47	1,079,521.60	2,292.43
1881–2	909,620.90	885,894.79	2,971.87
1882–3	935,675.72	792,286.71	3,142.28
1883–4	1,000,977.83	1,016,217.44	2,826.88
1884–5	1,146,910.94	1,266,302.35	2,978.62
1885–6	1,045,862.87	1,031,501.28	3,067.26
1886–7	1,108,044.84	951,781.79	3,139.86
1887–8	1,170,990.48	1,310,850.67	3,551.57
1888–9	1,317,295.97	1,104,208.21	4,172.33
1889–0	1,365,426.39	1,477,208.76	5,063.43
1890–1	1,799,807.85	1,690,050.08	5,197.30
1891–2	1,879,165.48	1,845,765.45	5,117.36
1892–3	1,718,461.74	1,956,307.82	5,343.91
Totals	$24,371,347.87	$24,024,203.14	$66,510.30
1874–5 *	897,550.24	1,137,321.94	2,339.63
	$25,268,898.11	$25,161,525.08	$68,849.93
Cash balance June 1, 1893		107,373.03	
	$25,268,898.11	$25,268,898.11	

Aggregate transactions past twenty-one years $50,430,423.19

Total cost to state $68,849.93

Per cent. of cost, 0.136 of one per cent.

During the twenty years I have received and accounted for on account of interest on deposits of state funds the sum of $50,179.14. Giving the treasury department

*Josiah G. Dearborn's term.

credit for this sum reduces the net expense of the department for the period of twenty years to the sum of $16,331.16, and the percentage of expense to less than 0.04 of one per cent. The foregoing computations do not include the transactions of the state prison, aggregating about $40,000 per annum, the receipt and disbursement of which is imposed upon the treasurer; the disbursement to the towns of the balance of the municipal war loan bonds remaining in the treasurer's hands July 1, 1872, of $458,046.24; nor the securities of the Benjamin Thompson estate, amounting to $355,485.76.

It is doubtful if any mercantile business, financial institution, or corporation of any class, can present a more satisfactory exhibit.

SOLON A. CARTER,
Treasurer.

AUDITORS' REPORT.

CONCORD, May 31, 1893.

To His Excellency the Governor and the Honorable Council:

We have examined the treasurer's accounts from June 1, 1892, to date, as shown by the foregoing report, and find,—

Cash on hand June 1, 1892	$345,219.11
Receipts to June 1, 1893	1,718,461.74
Total	$2,063,680.85
Expenditures	1,956,307.82
Cash on hand May 31, 1893	$107,373.03

We also have examined the assets of the Benjamin Thompson fund in the hands of the treasurer, and find securities amounting at the appraisal to the state to $354,285.76. We also find in the treasurer's hands the sum of $5,595.50, being balance of deposits by railroad corporations for land damages as shown by his account, and also the sum of $248.98, being balance of literary fund, making total cash and securities in the treasury May 31, 1893, as follows:

Treasury cash balance	$107,373.03
Railroad damages deposited	5,595.50
Balance literary fund	248.98
Securities Benjamin Thompson estate at original appraisal	354,285.76
	$467,503.27

We find the treasurer's books correctly kept, with vouchers for all expenditures, and certify that all receipts have been duly accounted for and all expenditures made in accordance with law.

[Signed] GEORGE E. KENT, *Accountant.*

FRANK N. PARSONS,
TRUE L. NORRIS,
H. B. MOULTON,
Committee of the Council.

APPENDIX.

APPENDIX.

TABULAR STATEMENT

Showing the number of shares in the various chartered stock insurance companies in the state, April 1, 1892, the amount of tax paid by them the amount distributed to the several cities and towns, and the balance accruing as revenue to the state.

Companies.	Shares.	Tax.	To towns.	To tate.
Capital Fire Insurance Co.....	2,000	$2,000.00	$1,437.75	$562.25
Fire Underwriters Association.....	100	100.00	75.00	25.00
Granite State Fire Insurance Co.....	2,000	2,000,00	1,459.50	540.50
New Hampshire Fire Insurance Co...	7,000	7,000.00	4,911.00	2,089.00
Peoples Fire Insurance Co.....	3,500	3,500.00	2,515.50	984.50
Portsmouth Fire Association.....	500	500.00	373.00	127.00
State Dwelling-House Fire Ins. Co....	150	150.00	112.50	37.50
Totals.....	15,250	$15,250.00	$10,884.25	$4,365.75

TABULAR STATEMENT

Showing the assessment of railroad taxes for 1892, the amount distributed to the several cities and towns, and the balance accruing as revenue to the state: also assessments on account expenses railroad commissioners to June 1, 1892.

CORPORATIONS.	Tax assessed.	To Towns.	To State.	Expenses R. R. Com.
Boston & Maine	$39,584.97	$14,072.72	$25,512.25	*a* $2,311.30
Concord & Montreal	86,674.87	67,849.51	18,825.36	*b* 1,928.80
Concord & Claremont	8,822.28	8,773.57	48.71	*c*.....
Concord & Portsmouth	8,880.00	7,859.20	1,020.80	*d*.....
Concord Street	296.00	262.10	33.90	25.22
Connecticut River	3,167.20	873.43	2,293.77	56.97
Dover & Winnipesaukee	5,478.96	4,762.09	716.87	*c*.....
Eastern	5,176.06	4,123.85	1,052.21	*c*.....
Fitchburg	23,873.88	6,345.28	17,528.60	488.30
Grand Trunk	7,244.60	1,811.15	5,433.45	236.01
Manchester & Lawrence	22,151.22	14,217.94	7,933.28	*c*.....
Manchester & North Weare	1,184.00	296.00	888.00	*d*.....
Manchester & Keene assessed to B. & L. and C. & M., one half each	1,505.16	376.29	1,128.87	*c* and *d*.
Manchester Street Railway	444.00	444.00	.....	36.61
Mount Washington	2,220.00	446.72	1,773.28	24.42
Nashua, Acton & Boston	296.00	143.72	152.28	*d*.....
Nashua & Lowell	5,539.64	2,424.29	3,115.35	*c*.....
Northern	33,132.76	15,191.19	17,941.57	*c*.....
Peterborough	728.16	497.32	230.84	*c*.....
Peterborough & Hillsborough	1,036.00	1,036.00	.....	*c*.....
Portland & Ogdensburg	4,432.60	1,134.26	3,298.34	130.21
Portland & Rochester	444.00	111.45	332.55	12.21
Portsmouth & Dover	1,480.00	1,398.72	81.28	*c*.....
Profile & Franconia Notch	1,480.00	1,461.75	18.25	17.10
Sullivan County	10,360.00	2,590.00	7,770.00	198.58
Suncook Valley	2,018.72	1,932.48	86.24	*d*.....
West Amesbury Branch	296.00	131.00	165.00	3.26
Wilton	3,668.18	3,006.66	661.52	*c*.....
Whitefield & Jefferson	1,850.00	462.50	1,387.50	*d*.....
Wolfeborough	673.40	174.85	498.55	*c*.....
Worcester, Nashua & Rochester	17,542.44	8,661.21	8,881.23	*c*.....
	$301,681.10	$172,871.25	$128,809.85	$5,468.99
Taxes on Manchester & Keene for 1890 and 1891, and Whitefield & Jefferson for 1891. (See p. 173, Report of 1892.)		1,180.40		
Totals	$301,681.10	$174,051.65	$128,809.85	$5,468.99

a Includes entire system.
b Includes entire system.
c Included in Boston & Maine.
d Included in Concord & Montreal.

TABULAR STATEMENT

Showing the valuation of the several telegraph companies within the limits of the state, and the tax assessed upon them by the state board of equalization, for the year 1892.

Corporations.	Valuation.	Tax assessed.	Tax paid.
American	$2,000.00	$29.60	$29.60
Chester & Derry	400.00	5.92	5.92
Commercial Union	8,000.00	118.40	118.40
Direct U. S. Cable	10,000.00	148.00	148.00
Great Northwestern	5,000.00	74.00	74.00
Maine	10,000.00	148.00	148.00
Western Union	160,000.00	2,368.00	2,368.00
Total	$195,400.00	$2,891.92	$2,891.92

TABULAR STATEMENT

Showing the valuation of the several telephone companies within the limits of the state, and the tax assessed upon them by the state board of equalization for the year 1892.

Corporations.	Valuation.	Tax assessed.	Tax paid.
Brattleborough & Chesterfield	$500.00	$7.40	$7.40
Brattleborough & Hinsdale	1,000.00	14.80	14.80
Colebrook, Stewartstown & Connecticut Lake	600.00	8.88	8.88
New England Telephone & Telegraph Co	130,000.00	1,924.00	1,924.00
Plymouth & Campton	3,000.00	44.40	44.40
Winnipesaukee Bell	6,000.00	88.80	88.80
Total	$141,100.00	$2,088.28	$2,088.28

TABULAR STATEMENT

Showing the amount of deposits in each savings-bank in the State, April 1, 1892, the amount invested in real estate, the balance subject to tax, tax paid, amount distributed to towns, and balance accruing to the literary fund.

Banks.	Deposits.	Proportional amount of real estate.	Balance subject to tax.	Tax paid.	To towns.	To literary fund.
Alton	$67,872.38	$1,042.00	$66,830.38	$668.30	$664.21	$4.09
Amoskeag	4,478,151.81	.....	4,478,151.81	44,781.52	42,451.97	2,329.55
Ashland	37,462.84	5,244.70	32,218.14	322.18	321.52	.66
Belknap	1,174,450.15	18,180.00	1,156,270.15	11,562.70	11,003.27	559.43
Bristol	598,978.00	9,001.76	589,976.24	5,899.76	5,861.79	37.97
Cheshire Provident Institution	2,781,384.27	92,712.81	2,688,671.46	26,886.71	22,203.30	4,683.41
City Guaranty	426,988.51	13,050.00	413,938.51	4 139.39	3,634.95	504.44
Cochecho	345,860.01	20,378.00	325,482.01	3,254.82	2,906.18	348.64
Colebrook Guaranty	144,251.09	.....	144,351.09	1,442.51	1,260.65	181.86
Connecticut River	737,849.63	.....	737,849.63	7,378.50	5,902.94	1,475.56
Contoocook Valley	74,663.29	10,750.00	63,913,29	639.13	617.31	21.82
Conway	127,956.87	2,360.00	125,596.87	1,255.97	1,190.71	65.26
Dartmouth	1,085,949.33	8,000.00	1,077,949.33	10,779.49	6,840.95	3,938.54
Dover Five Cents	283,690.32	10,477.47	273,212.85	2,732.13	2,492.32	239.81
Epping	68,568.11	850.00	67,718.11	677.18	677.18	.....
Farmers	113,083.52	.....	113,083.52	1,130.84	1,130.84	.....
Farmington	641,811.59	64,865.66	576,945.93	5,769.46	5,582.44	187.02
Fitzwilliam	178,183.72	11,246.00	166,937.72	1,669.38	1,492.95	176.43
Francestown	114,602.35	4,011.50	110,590.85	1,105.91	1,090.12	15.79
Franklin	924,420.94	24,959.36	899,461.58	8,994.62	8,994.62	.....
Gorham Five Cents	55,522.79	2,776.07	52,746.72	527.47	520.74	6.73
Guaranty, Manchester	1,002,759.25	29,104.02	973,655.23	9,736.55	9,372.79	363.76
Hillsborough Bridge Guaranty	154,670.98	.....	154,670.98	1,546.71	1,546.71	.....
Hinsdale	309,086.40	4,739.28	304,347.12	3,043.47	2,517.74	525.73
Iona	367,043.07	10,813.03	356,230.04	3,562.30	3,459.11	103.19
Keene Five Cents	3,011,911.00	18,822.00	2,993,089.00	29,930.89	26,164.50	3,766.39
Keene Guaranty	1,525,093.86	14,883.00	1,510,210.86	15,102.11	13,343.61	1,758.50
Laconia	1,263,553.25	7,000.00	1,256,553.25	12,565.53	11,767.47	798.06
Lake Village	310,827.77	21,400.00	289,427.77	2,894.28	2,836.05	58 23
Lancaster	532,947.19	3,122.30	529,824.89	5,298.25	4,325.60	972.65

Lebanon	1,056,848.46	19,023.26	1,037,825.26	10,378.25	8,447.40	1,930.85
Littleton	1,038,587.77	6,448.00	1,032,139.77	10,321.40	9,394.69	926.71
Loan and Trust	2,577,430.61	30,150.00	2,547,280.61	25,472.81	24,845.70	627.11
Manchester	6,489,828.83	.....	6,489,828.83	64,898.29	60,728.42	4,169.87
Mason Village	118,702.56	.....	118,702.56	1,187.03	1,129.32	57.71
Mechanics, Manchester	377,473.55	.....	377,473.55	3,774.74	3,559.92	214.82
Mechanics, Nashua	650,802.35	.....	650,802.35	6,508.02	5,425.31	1,082.71
Meredith Village	535,925.66	.....	535,925.66	5,359.26	5,161.16	198.10
Merrimack County	1,298,442.65	31,950.00	1,266,492.65	12,664.93	12,217.83	447.10
Merrimack River	3,062,141.24	91,218.64	2,970,922.60	29,709.23	27,912.72	1,796.51
Milford	1,301,525.88	20,375.00	1,281,150.88	12,811.51	12,057.22	754.29
Monadnock	635,773.26	29,539.13	606,234.13	6,062.34	5,304.51	757.83
Nashua	3,352,652.59	64,369.53	3,288,283.06	32,882.83	30,432.50	2,450.33
New Hampshire Banking Company	1,260,047.60	20,108.11	1,239,939.49	12,399.39	11,364.36	1,035.03
New Hampshire	3,998,457.62	65,000.00	3,933,457.62	39,334.58	37,316.05	2,018.53
New Ipswich	54,199.00	9,000.00	45,199.00	451.99	443.07	8.92
Newport	705,761.36	15,602.00	690,159.36	6,901.59	6,725.99	175.60
Norway Plains	676,212.46	12,000.00	664,212.46	6,642.12	5,760.30	881.82
Ossipee Valley	129,613.54	2,229.54	127,384.00	1,273.84	1,060.63	213.21
Peoples	914,742.72	.....	914,742.72	9,147.43	8,770.81	376.62
Peterborough	913,819.49	30,086.00	883,733.49	8,837.33	8,456.99	380.34
Piscataqua	557,521.98	12,087.47	545,434.51	5,454.35	3,633.56	1,820.79
Pittsfield	384,735.33	6,314.00	378,421.33	3,784.21	3,735.77	48.44
Plymouth Guaranty	203,808.70	.....	203,808.70	2,038.09	2,0 5.47	22.62
Portsmouth	4,081,758.00	68,886.44	4,012,871.56	40,128.72	28,779.94	11,348.78
Portsmouth Trust and Guaranty Company	935,102.72	21,071.97	914,030.75	9,140.31	8,095.15	1,045.16
Public Guaranty	351,155.90	16,048.79	335,107.11	3,351.07	2,863.09	487.98
Rochester	260,769 20	8,180.77	252,588.43	2,525.88	2,065.64	460.24
Rollinsford	711,042.58	55,283.45	655,759.13	6,557.59	3,208.34	3,349.25
Sandwich	30,60€.41	475.00	30,131.41	301.31	293.65	7.66
Security	268,269.80	4,150.00	264,119.80	2,641.20	2,198.75	442.45
Siwooganock	388,042.05	.....	388,042.05	3,880.42	3,308.00	572.42
Somersworth	1,167,878.85	81.778.19	1,086,100.66	10,861.01	7,368.76	3,492.25
Squamscott	78,495.22	.....	78,495.22	784.95	767.95	17.00
Strafford	4,281,064.95	25,354.68	4,255,710.27	42,557.10	39,568.60	2,988.50
Sullivan Savings Institution	1,631,375.38	19,461.25	1,611,914.13	16,119.14	13,697.44	2,421.70
Union Five Cents	509,136.62	16,116.18	493,020.44	4,930.20	4,796.71	133.49
Union Guaranty	791,843.85	7,270.64	784,573.21	7,845.73	7,584.47	261.26
Walpole	199,204.05	3,984.02	195,220.03	1,9 2.20	1,519.60	432.60
Wilton	179,912.00	19,450.00	160,462.00	1,604.62	1,586.27	18.35
Wolfeborough	170,025.36	.....	170,025.36	1,700.25	1,690.25	10.00
Woodsville Guaranty	112,350.89	.....	112,350.89	1,123.51	830.31	293.20
Total of savings-banks	$71,382,683.33	$1,222,801.02	$70,159,882.31	$701,598.83	$628,297.16	$73,301.67

TABULAR STATEMENT.—*Continued.*

Trust Companies.	Deposits.	Proportional amount of real estate.	Balance subject to tax.	Tax paid.	To towns.	To literary fund.
American	$100,000.00	.....	$100,000.00	$1,000.00	$345.00	$655.00
Berlin Savings Bank and Trust Company	57,621.32	.....	57,621.32	576.21	559.08	17.13
Granite State	287,580.89	.....	287,580.89	2,875.81	2,773.12	102.69
Lancaster	100,000.00	.....	100,000.00	1,000.00	832.00	168.00
Lisbon Savings Bank and Trust Company	114,803.45	.....	114,803.45	1,148.03	1,089.85	58.18
Nashua	132,701.42	.....	132,701.42	1,327.01	1,288.78	38.23
New Hampshire	850,026.98	$294,950.25	555,076.73	5,550.77	4,577.86	972.91
Rochester Loan and Banking Company	659,105.53	600.00	658,505.53	6,585.06	6,085.17	499.89
E. H. Rollins & Sons	300,000.00	.....	300,000.00	3,000.00	987.00	2,013 00
Security	390,028.11	.....	390,028.11	3,900.28	3,176.90	723.38
Whitefield Bank and Trust Company	53,508.95	.....	53,508.95	535.09	530.49	4.60
Wolfeborough Loan and Banking Company	168,766.89	.....	168,766.89	1,687.67	1,627.01	60.66
Woodsville Loan and Banking Company	20,000.00	.....	20,000.00	200.00	145.00	55.00
Total of Trust Companies	$3,234,143.54	$295,550.25	$2,938,593.29	$29,385.93	$24,017.26	$5,368.67
Grand total	$74,616,826.87	$1,518,351.27	$73,098,475.60	$730,984.76	$652,314.42	$78,670.34

TABULAR STATEMENT

SHOWING AMOUNT OF STATE TAX COLLECTED, AND AMOUNTS CREDITED TOWNS AND CITIES FOR INSURANCE, RAILROAD, AND SAVINGS-BANK TAXES AND LITERARY FUND FOR THE YEAR 1892.

TABULAR STATEMENT

Showing the amount of state tax collected; the amount credited to the several cities and towns for insurance tax, railroad tax, savings-bank tax, and literary fund, for the year 1892; total credits and balances.

Towns.	State tax.	Insurance tax.	Railroad tax.	Savings-bank tax.	Literary fund.	Total credits.	Balance paid to town.	Balance paid to state.
Acworth	$945.00	.....	.....	$1,630.67	$203.52	$1,834.19	$889.19	.....
Albany	205.00	.....	.....	21.27	75.52	96.79	.....	$108.21
Alexandria	555.00	.....	$20.86	637.26	206.08	864.20	309.20	.....
Allenstown	1,505.00	$15.00	244.17	1,319.49	101.12	1,679.78	174.78	.....
Alstead	1,385.00	.....	.....	2,123.01	208.64	2,331.65	946.65	.....
Alton	1,465.00	.....	490.42	2,142.36	279.04	2,911.82	1,446.82	.....
Amherst	1,995.00	24.75	472.73	3,154.54	241.92	3,893.94	1,898.94	.....
Andover	1,310.00	12.00	716.51	2,036.57	217.60	2,982.68	1,672.68	.....
Antrim	1,535.00	29.25	1.76	2,777.91	311.04	3,119.96	1,584.96	.....
Ashland	1,090.00	6.00	145.22	1,320.93	340.48	1,812.63	722.63	.....
Atkinson	645.00	.....	115.27	226.53	66.56	408.36	.....	236.64
Auburn	710.00	.....	45.58	1,204.73	161.28	1,411.59	701.59	.....
Barnstead	1,330.00	7.50	1.12	2,489.21	258.56	2,756.39	1,426.39	.....
Barrington	1,370.00	4.50	232.05	2,414.32	409.60	3,060.47	1,690.47	.....
Bartlett	630.00	.....	384.50	99.01	358.40	841.91	211.91	.....
Bath	1,105.00	.....	132.34	456.61	230.40	819.35	.....	285.65
Bedford	1,625.00	.....	56.02	2,603.31	243.20	2,902.53	1,277.53	.....
Belmont	1,400.00	.....	134.40	1,855.18	263.68	2,253.26	853.26	.....
Bennington	660.00	3.75	71.54	1,125.42	125.44	1,326.15	666.15	.....
Benton	195.00	.....	23.67	35.46	70.40	129.53	.....	65.47
Berlin	1,875.00	.....	45.89	373.00	567.04	985.93	.....	889.07
Bethlehem	1,580.00	.....	338.19	1,139.66	396.80	1,874.65	294.65	.....
Boscawen	1,785.00	5.25	753.00	1,828.56	320.00	2,906.81	1,121.81	.....

Bow	1,240.00	1.50	223.47	2,674.29	171.52	3,070.78	1,830.78	.....
Bradford	1,205.00	3.75	445.51	2,072.84	177.92	2,700.02	1,495.02	.....
Brentwood	720.00	3.75	21.48	800.64	163.84	989.71	269.71	.....
Bridgewater	320.00	.....	18.35	425.34	89.60	533.29	213.29	.....
Bristol	1,900.00	5.25	380.68	3,514.76	353.28	4,253.97	2,353.97	.....
Brookfield	325.00	.....	11.00	435.78	102.40	549.18	224.18	.....
Brookline	720.00	.....	.42	1,012.17	122.88	1,135.47	415.47	.....
Campton	855.00	.....	68.94	1,149.75	245.76	1,464.45	609.45	.....
Canaan	1,320.00	1.50	637.44	1,671.31	437.76	2,748.01	1,428.01	.....
Candia	1,180.00	.....	111.07	2,757.97	249.60	3,118.64	1,938.64	.....
Canterbury	1,315.00	.....	261.67	1,868.70	208.64	2,339.01	1,024.01	.....
Carroll	635.00	7.50	213.85	251.01	206.08	678.44	43.44	.....
Centre Harbor	620.00	.....	6.75	1,183.51	98.56	1,288.82	668.82	.....
Charlestown	2,265.00	.....	1,169.22	3,929.83	364.80	5,463.85	3,198.85	.....
Chatham	180.00	.....	.....	.49	149.76	150.25	.....	29.75
Chester	1,075.00	.....	67.96	1,581.85	221.44	1,871.25	796.25	.....
Chesterfield	1,580.00	.....	.28	2,057.66	204.80	2,262.74	682.74	.....
Chichester	905.00	.....	414.74	1,555.85	131.84	2,102.43	1,197.43	.....
Claremont	6,825.00	26.25	1,080.21	9,705.12	1,054.72	11,866.30	5,041.30	.....
Clarksville	230.00	.....	.....	23.09	115.20	138.29	.....	91.71
Colebrook	1,725.00	4.50	.....	1,130.82	487.68	1,623.00	.....	102.00
Columbia	545.00	.....	.....	143.91	170.24	314.15	.....	230.85
Concord	31,650.00	965.25	31,946.83	42,481.85	3,513.60	78,907.53	47,257.53	.....
Conway	1,765.00	7.50	1,275.89	1,295.45	648.96	3,227.80	1,462.80	.....
Cornish	1,075.00	.....	134.64	802.78	206.08	1,143.50	68.50	.....
Croydon	455.00	.....	.....	481.97	116.48	598.45	143.45	.....
Dalton	345.00	.....	49.53	193.12	148.48	391.13	46.13	.....
Danbury	690.00	.....	299.54	1,145.68	165.12	1,610.34	920.34	.....
Danville	460.00	.....	7.52	504.01	122.88	634.41	174.41	.....
Deerfield	1,435.00	30.75	671.61	2,159.72	309.76	3,171.84	1,736.84	.....
Deering	560.00	.....	11.87	861.50	128.00	1,001.37	441.37	.....
Derry	2,525.00	.....	473.35	4,007.34	537.60	5,018.29	2,493.29	.....
Dorchester	240.00	.....	4.00	207.66	120.32	331.98	91.98	.....
Dover	22,525.00	146.25	5,612.60	27,285.20	1,861.12	34,905.17	12,380.17	.....
Dublin	1,170.00	.....	.....	1,674.28	134.40	1,808.68	638.68	.....
Dummer	270.00	.....	16.91	48.02	125.44	190.37	.....	79.63
Dunbarton	1,130.00	.....	388.34	2,023.43	122.88	2,584.65	1,454.65	.....
Carried forward	$120,880.00	$1,311.75	$50,450.91	$158,183.71	$19,445.76	$229,392.13	$110,631.11	$2,118.98

TABULAR STATEMENT.—*Continued.*

Towns.	State tax.	Insurance tax.	Railroad tax.	Savings-bank tax.	Literary fund.	Total credits.	Balance paid to town.	Balance paid to state.
Brought forward	$120,880.00	$1,311.75	$50,450.91	$158,183.71	$19,445.76	$229,393.13	$110,631.11	$2,118.98
Durham	1,610.00	.....	307.41	1,955.73	212.48	2,475.62	865.62	.....
East Kingston	495.00	7.50	184.29	67.76	110.08	369.63	.....	125.37
Easton	240.00	.....	.....	356.08	70.40	426.48	186.48	.....
Eaton	280.00	.....	.....	99.50	158.72	258.22	....	21.78
Effingham	460.00	.....	.....	232.45	197.12	429.57	.....	30.43
Ellsworth	70.00	.....	.....	59.25	38.40	97.65	27.65	.....
Enfield	1,760.00	.....	688.35	2,696.00	296.96	3,681.31	1,921.31	.....
Epping	1,690.00	9.00	653.77	1,597.46	373.76	2,633.99	943.99	.....
Epsom	1,015.00	21.75	222.57	1,495.92	161.28	1,901.52	886.52	.....
Errol	200.00	.....	.....	50.32	52.48	102.80	.....	97.20
Exeter	6,395.00	126.00	3,604.79	4,022.24	734.72	8,487.75	2,092.75	.....
Farmington	4,020.00	.....	355.81	5,283.69	720.64	6,360.14	2,340.14	.....
Fitzwilliam	1,360.00	.....	162.92	2,625.20	316.16	3,104.28	1,744.28	.....
Francestown	1,255.00	71.25	75.67	1,666.68	180.48	1,994.08	739.08	.....
Franconia	825.00	.....	123.33	494.83	124.16	742.32	.....	82.68
Franklin	6,335.00	75.75	9,946.80	7,430.05	989.44	18,442.04	12,107.04	.....
Freedom	785.00	3.75	.....	699.09	161.28	864.12	79.12	.....
Fremont	600.00	.....	195.72	581.81	158.72	936.25	336.25	.....
Gilford	3,665.00	25.50	402.68	5,884.22	641.28	6,953.68	3,288.68	.....
Gilmanton	1,435.00	.....	1.66	2,375.36	268.80	2,645.82	1,210.82	.....
Gilsum	830.00	7.50	.....	1,688.01	134.40	1,829.91	999.91	.....
Goffstown	3,300.00	61.50	305.48	6,115.31	526.08	7,008.37	3,708.37	.....
Gorham	985.00	10.50	631.23	582.11	464.64	1,688.48	703.48	.....
Goshen	390.00	.....	.....	575.06	102.40	677.46	287.46	.....
Grafton	850.00	.....	273.11	1,369.28	259.84	1,902.23	1,052.23	.....
Grantham	360.00	.....	59.46	403.83	116.48	579.77	219.77	.....
Greenfield	820.00	3.75	160.21	1,454.43	144.64	1,763 03	943.03	.....
Greenland	995.00	11.25	428.56	1,190.00	149.76	1,779.57	784.57	.....
Greenville	1,500.00	36.00	281.69	1,285.76	174.08	1,777.53	277.53	.....
Groton	305.00	.....	1.35	302.10	134.40	437.85	132.85	.....
Hampstead	965.00	.....	555.26	924.82	213.76	1,693.84	728.84	.....
Hampton	1,420.00	.....	299.87	631.82	163.84	1,095.53	.....	324.47

Hampton Falls	660.00	42.00	135.32	288.53	125.44	591.29	.....	68.71
Hancock	960.00	2.25	147.14	1,914.34	167.68	2,231.41	1,271.41	.....
Hanover	2,915.00	37.50	529.00	3,873.57	398.08	4,838.15	1,923.15	.....
Harrisville	845.00	.....	121.93	1,434.86	174.08	1,730.87	885.87	.....
Hart's Location	60.00	.....	59.28	51.46	.....	110.74	50.74	.....
Haverhill	2,610.00	3.75	619.92	1,791.59	793.60	3,208.86	598.86	.....
Hebron	220.00	.....	1.35	392.59	65.28	459.22	239.22	.....
Henniker	1,880.00	.....	249.77	3,458.21	261.12	3,969.10	2,089.10	.....
Hill	510.00	.....	231.35	728.54	119.04	1,078.93	568.93	.....
Hillsborough	2,565.00	69.75	121.82	3,961.43	441.60	4,594.60	2,029.60	.....
Hinsdale	2,480.00	11.25	40.27	3,127.86	689.92	3,869.30	1,389.30	.....
Holderness	515.00	.....	6.75	494.87	158.72	660.34	145.34	.....
Hollis	1,760.00	52.50	204.74	1,797.58	212.48	2,267.30	507.30	.....
Hooksett	1,875.00	129.00	621.18	2,632.20	294.40	3,676.78	1,801.78	....
Hopkinton	2,710.00	45.75	383.86	4,439.95	369.92	5,239.48	2,529.48	. .....
Hudson	1,740.00	15.00	515.64	2,933.57	253.44	3,717.65	1,977.65	.....
Jackson	470.00	.....	.....	139.45	152.32	291.77	.....	178.23
Jaffrey	2,320.00	10.50	225.23	4,267.13	314.88	4,817.74	2,497.74	.....
Jefferson	615.00	.....	358.90	291.24	317.44	967.58	352.58	.....
Keene	18,125.00	483.00	5,527.00	26,391.67	1,498.88	33,900.55	15,775.55	.....
Kensington	600.00	.....	13.44	387.88	115.20	516.52	.....	83.48
Kingston	820.00	.....	175.06	239.16	186.88	601.10	.....	218.90
Laconia	6,470.00	174.75	2,171.94	9,914.74	1,020.16	13,281.59	6,811.59	.....
Lancaster	3,120.00	76.50	153.70	5,074.25	896.00	6,200.45	3,080.45	.....
Landaff	570.00	.....	18.26	749.05	124.16	891.47	321.47	.....
Langdon	630.00	.....	.....	918.78	76.80	995.58	365.58	.....
Lebanon	5,600.00	32.25	2,319.94	7,108.60	970.24	10,431.03	4,831.03	.....
Lee	935.00	.....	462.69	1,189.29	138.24	1,790.22	855.22	.....
Lempster	465.00	.....	8.00	743.44	122.88	874.32	409.32	.....
Lincoln	120.00	.....	.....	178.82	28.16	206.98	86.98	.....
Lisbon	2,255.00	.....	126.18	1,860.67	528.64	2,515.49	260.49	.....
Litchfield	760.00	5.25	72.23	1,294.41	64.00	1,435.89	675.89	.....
Littleton	3,635.00	.....	305.76	4,325.89	838.40	5,470.05	1,835.05	.....
Livermore	135.00	.....	.....	22.52	.....	22.52	.....	112.48
Londonderry	1,680.00	22.50	482.22	2,847.25	275.20	3,627.17	1,947.17	.....
London	1,600.00	7.50	145.88	3,031.32	239.36	3,424.06	1,824.06	.....
Lyman	405.00	.....	.....	197.11	122.88	319.99	.....	85.01
Lyme	1,190.00	.75	26.83	1,600.93	357.12	1,985.63	795.63	.....
Lyndeborough	710.00	1.50	72.08	608.42	147.20	829.20	119.20	.....
Madbury	760.00	.....	131.70	1,450.38	64.00	1,646.08	886.08	.....
Madison	365.00	.....	45.85	416.47	93.44	555.76	190.76	.....
Carried forward	$246,755.00	$3,006.00	$87,205.11	$322,949.90	$41,214.72	$454,375.73	$211,168.45	$3,547.72

TABULAR STATEMENT.—*Continued.*

Towns.	State tax.	Insurance tax.	Railroad tax.	Savings-bank tax.	Literary fund.	Total credits.	Balance paid to town.	Balance paid to state.
Brought forward	$246,755.00	$3,006.00	$87,205.11	$322,949.90	$41,214.72	$454,375.73	$211,168.45	$3,547.72
Manchester	65,615.00	4,199.25	25,849.65	78,101.94	6,010.88	114,161.72	48,546.72	.....
Marlborough	1,790.00	.....	148.80	3,525.02	444.16	4,117.98	2,327.98	.....
Marlow	1,185.00	3.75	.....	3,244.76	152.32	3,400.83	2,215.83	.....
Mason	735.00	.....	127.05	582.63	107.52	817.20	82.20	.....
Meredith	1,955.00	48.75	154.96	3,723.95	307.20	4,234.86	2,279.86	.....
Merrimack	1,705.00	.....	895.85	3,070.72	231.68	4,198.25	2,493.25	.....
Middleton	305.00	.....	.....	574.08	62.72	636.80	331.80	.....
Milan	535.00	.....	70.45	401.36	311.04	782.85	247.85	.....
Milford	5,145.00	173.25	758.43	9,533.36	673.28	11,138.32	5,993.32	.....
Milton	1,635.00	7.50	82.45	3,034.63	384.00	3,508.58	1,873.58	.....
Mont Vernon	740.00	.....	27.70	880.43	87.04	995.17	255.17	.....
Monroe	505.00	.....	.....	83.40	142.08	225.48	.....	279.52
Moultonborough	805.00	.....	.....	906.41	307.20	1,213.61	408.61	.....
Nashua	29,215.00	971.25	8,965.48	39,852.66	3,420.16	53,209.55	23,994.55	.....
Nelson	440.00	.....	2.40	849.38	72.96	924.74	484.74	.....
New Boston	1,755.00	42.00	35.11	3,471.75	320.00	3,868.86	2,113.86	.....
Newbury	750.00	.....	93.14	1,386.86	96.00	1,576.00	826.00	.....
Newcastle	500.00	.....	73.18	942.08	81.92	1,097.18	597.18	.....
New Durham	620.00	.....	49.49	707.18	153.60	910.27	290.27	.....
New Hampton	850.00	.....	20.22	1,468.30	179.20	1,667.72	817.72	.....
Newington	545.00	.....	38.18	752.52	62.72	853.42	308.42	.....
New Ipswich	1,310.00	.....	.....	1,206.57	252.16	1,458.73	148.73	.....
New London	905.00	11.25	106.85	1,412.70	185.60	1,716.40	811.40	.....
Newmarket	2,800.00	7.50	475.40	1,516.71	536.32	2,535.93	.....	264.07
Newport	3,985.00	111.00	2,638.28	6,459.74	629.76	9,838.78	5,853.78	.....
Newton	775.00	.....	230.28	60.69	243.20	534.17	.....	240.83
Northfield	1,265.00	.....	211.87	1,445.53	101.12	1,758.52	493.52	.....
North Hampton	1,390.00	22.50	85.04	1,433.99	181.76	1,723.29	333.29	.....
Northumberland	985.00	.....	555.60	697.98	428.80	1,682.38	697.38	.....
Northwood	1,435.00	21.00	4.35	2,493.48	282.88	2,801.71	1,366.71	.....
Nottingham	925.00	.....	8.94	909.08	213.76	1,131.78	206.78	.....
Orange	145.00	.....	29.41	103.71	71.68	204.80	59.80	.....

Orford	940.00			387.83	257.28	645.11		294.89
Ossipee	1,285.00	.75	340.75	1,716.97	432.64	2,491.11	1,206.11	
Pelham	1,140.00		129.01	786.62	189.44	1,105.07		34.93
Pembroke	3,075.00	210.00	377.18	4,286.40	313.60	5,187.18	2,112.18	
Peterborough	4,230.00	249.00	737.27	6,974.22	573.44	8,533.93	4,303.93	
Piermont	735.00			268.38	204.80	473.18		261.82
Pittsburg	595.00			88.93	158.72	247.65		347.35
Pittsfield	2,900.00	48.75	516.49	4,485.39	578.56	5,629.19	2,729.19	
Plainfield	1,285.00		30.30	1,585.88	281.60	1,897.78	612.78	
Plaistow	690.00		154.45	222.95	172.80	550.20		139.80
Plymouth	2,175.00	69.00	1,028.23	3,153.70	522.24	4,773.17	2,598.17	
Portsmouth	24,125.00	1,113.25	23,422.68	28,580.69	1,681.92	54,798.54	30,673.54	
Randolph	130.00			27.63	23.04	50.67		79.33
Raymond	945.00		134.46	1,824.04	295.68	2,254.18	1,309.18	
Richmond	605.00			857.54	116.48	974.02	369.02	
Rindge	1,420.00		68.41	2,561.14	186.88	2,816.43	1,396.43	
Rochester	8,710.00	144.75	2,098.55	12,794.59	1,493.76	16,531.65	7,821.65	
Rollinsford	3,060.00	7.50	818.40	3,797.03	390.40	5,013.33	1,953.33	
Roxbury	190.00		6.59	362.37	23.04	392.00	202.00	
Rumney	815.00	15.00	159.09	1,367.25	244.48	1,785.82	970.82	
Rye	1,950.00	11.25	225.18	4,061.26	189.44	4,487.13	2,537.13	
Salem	1,275.00		543.28	695.50	369.92	1,608.70	333.70	
Salisbury	845.00		31.20	1,279.62	144.64	1,455.46	610.46	
Sanbornton	1,200.00		143.10	2,574.19	231.68	2,948.97	1,748.97	
Sandown	415.00		117.71	453.18	104.96	675.85	260.85	
Sandwich	1,125.00		10.80	920.79	308.48	1,240.07	115.07	
Seabrook	575.00		163.14	145.00	362.24	670.38	95.38	
Sharon	155.00			129.61	26.88	156.49	1.49	
Shelburne	285.00		241.29	84.51	107.52	433.32	148.32	
Somersworth	7,115.00	38.25	645.97	8,682.87	1,207.04	10,574.13	3,459.13	
South Hampton	445.00		1.82	112.00	83.20	197.02		247.98
South Newmarket	1,190.00	19.50	1,231.86	1,073.31	197.12	2,521.79	1,331.79	
Springfield	380.00			445.69	148.48	594.17	214.17	
Stark	555.00		194.54	246.38	185.60	626.52	71.52	
Stewartstown	725.00			190.45	249.60	440.05		284.95
Stoddard	495.00			1,168.04	83.20	1,251.24	756.24	
Strafford	1,235.00			923.35	357.12	1,280.47	45.47	
Stratford	940.00		450.58	1,168.61	341.76	1,960.95	1,020.95	
Stratham	1,310.00		244.62	1,357.53	160.00	1,762.15	452.15	
Sullivan	515.00			981.31	115.20	1,096.51	581.51	
Sunapee	805.00		156.05	1,297.24	230.40	1,683.69	878.69	
Carried forward	$462,590.00	$10,552.00	$163,366.67	$601,903.49	$71,294.72	$847,116.88	$390,550.07	$6,023.19

TABULAR STATEMENT.—*Continued.*

Towns.	State tax.	Insurance tax.	Railroad tax.	Savings-bank tax.	Literary fund.	Total credits.	Balance paid to town.	Balance paid to state.
Brought forward	$462,590.00	$10,552.00	$163,366.67	$601,903.49	$71,294.72	$847,116.88	$390,550.07	$6,023.19
Surry	420.00	.....	7.09	832.49	69.12	908.70	488.70	.....
Sutton	920.00	.....	80.41	1,388.55	192.00	1,660.96	740.96	.....
Swanzey	2,085.00	3.00	118.03	4,000.60	408.32	4,529.95	2,444.95	.....
Tamworth	855.00	7.50	.....	899.71	222.72	1,129.93	274.93	.....
Temple	470.00	.....	7.38	678.84	80.64	766.86	296.86	.....
Thornton	390.00	.....	.....	185.41	172.80	358.21	.....	31.79
Tilton	2,385.00	22.50	2,138.37	4,385.39	401.92	6,948.18	4,563.18	.....
Troy	1,095.00	.....	148.86	1,615.52	189.44	1,953.82	858.82	.....
Tuftonborough	575.00	1.50	.....	339.15	168.96	509.61	.....	65.39
Unity	625.00	.....	.....	638.24	171.52	809.76	184.76	.....
Wakefield	1,620.00	27.75	1,180.61	2,096.75	372.48	3,677.59	2,057.59	.....
Walpole	3,715.00	.....	1,147.41	3,957.90	563.20	5,668.51	1,953.51	.....
Warner	1,955.00	21.75	1,220.04	2,784.25	291.84	4,317.88	2,362.88	.....
Warren	805.00	4.50	176.57	1,459.49	203.52	1,844 08	1,039.08	.....
Washington	730.00	.....	.....	836.09	122.88	958.97	228.97	.....
Waterville	65.00	.....	.....	1.13	8.96	10.09	.....	54.91
Weare	2,125.00	126.00	132.27	3,688.30	353.28	4,299.85	2,174.85	.....
Webster	870.00	.....	161.20	1,801.65	111.36	2,074.21	1,204.21	.....
Wentworth	570.00	.....	341.98	776.26	188.16	1,306.40	736.40	.....
Westmoreland	1,450.00	.....	193.90	2,566.96	194.56	2,955.42	1,505.42	.....
Wentworth's Location	55.00	.....	.....	.....	.....	.....	.....	55.00
Whitefield	1,435.00	.....	562.33	1,716.01	638.72	2,917.06	1,482.06	.....
Wilmot	750.00	3.75	60.47	1,175.57	183.04	1,422.83	672.83	.....
Wilton	2,755.00	20.25	1,383.88	4,490.57	396.80	6,291.50	3,536.50	.....
Winchester	3,450.00	.....	96.66	3,735.66	683.52	4,515.84	1,065.84	.....
Windham	835.00	.....	462.48	746.73	138 24	1,347.45	512.45	.....
Windsor	100.00	.....	.....	182.69	12.80	195.49	95.49	.....
Wolfeborough	2,785.00	93.75	205.09	3,318.76	518.40	4,136.00	1,351.00	.....
Woodstock	385.00	.....	859.95	112.21	72.96	1,045.12	660.12	.....
	$498,865.00							

Bean's Purchase	115.00						115.00
Bean's Grant	10.00						10.00
Cambridge	95.00			.05			94.95
Chandler's Purchase	5.00				.05		5.00
Cutt's Grant	15.00						15.00
Crawford's Purchase	55.00						55.00
Dixville	50.00						50.00
Dix's Grant	15.00						15.00
Erving's Grant	10.00						10.00
Green's Grant	105.00						105.00
Gilmanton & Atkinson Academies' Grant	55.00						55.00
Low & Burbank's Grant	40.00						40.00
Martin's Location	10.00						10.00
Millsfield	75.00						75.00
Odell's Township	115.00						115.00
Pinkham's Grant	10.00						10.00
Sargent's Purchase	55.00						55.00
Second College Grant	75.00						75.00
Success	95.00						95.00
Thompson & Meserve's Purchase	55.00						55.00
Kilkenney	75.00						75.00
	$500,000.00	$10,884.25	$174,051.65	$652,314.42	$78,426.88	$915,677.20	$423,042.43	$7,365.23

FINANCIAL STATEMENTS

OF THE CITIES AND TOWNS COMPILED BY COUNTIES, IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 16 OF THE PUBLIC STATUTES.

ROCKINGHAM

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Atkinson	$297,442.00	$3,569.31	1.20	.....	$322.09
2. Auburn	290,581.00	3,722.61	1.28	$450.00	2,049.24
3. Brentwood	309,168.00	3,246.26	1.05	439.50	459.66
4. Candia	346,975.00	5,204.63	1.50	3,192.97	3,028.82
5. Chester	372,101.00	4,651.42	1.25	.....	745.60
6. Danville	203,006.00	3,045.09	1.50	3,053.00	263.07
7. Deerfield	456,416.00	8,958.00	1.96	6,317.36	2,288.09
8. Derry	1,108,089.00	19,816.53	1.78	25,197.62	12,353.89
9. East Kingston	232,202.00	4,333.00	1.86½	4,401.52	4,125.72
10. Epping	712,101.00	10,756.15	1.51	24,246.93	8,065.70
11. Exeter	2,873,099.00	54,588.00	1.90	83,200.00	11,290.11
12. Fremont	250,100.00	3,101.35	1.24	218.72	786.26
13. Greenland	370,424.00	4,510.65	1.22	9,500.00	6,505.05
14. Hampstead	347,686.00	4,172.23	1.20	650.66	1,337.82
15. Hampton	647,915.00	8,098.87	1.25	6,644.11	699.98
16. Hampton Falls	289,346.00	3,616.41	1.25	975.00	371.03
17. Kensington	260,106.00	3,524.50	1.35	600.00	721.69
18. Kingston	356,210.00	6,234.48	1.75	7,096.87	1,355.32
19. Londonderry	522,400.00	7,836.00	1.50	7,700.00	6,721.05
20. Newcastle	211,870.00	4,121.92	1.94	27,090.00	1,922.97
21. Newington	224,927.00	2,143.54	.95	2,027.28	496.25
22. Newmarket	1,275,120.00	22,059.57	1.73	22,260.00	4,179.94
23. Newton	382,437.00	6,960.35	1.83	13,143.69	942.18
24. North Hampton	598,745.00	6,587.26	1.10	1,726.00	1,605.45
25. Northwood	515,898.00	9,139.69	1.77	16,463.59	3,111.81
26. Nottingham	345,598.00	3,628.78	1.05	11,711.93	1,381.12
27. Plaistow	324,977.00	4,484.58	1.38	1,581.33	860.56
28. Portsmouth	7,833,490.00	143,850.00	1.85	703,740.15	223,878.85
29. Raymond	363,474.00	5,489.83	1.51	.....	2,053.45
30. Rye	589,675.00	7,318.61	1.24	1,514.91	458.25
31. Salem	641,230.00	10,900.86	1.70	15,658.12	2,437.36
32. Sandown	168,526.00	2,990.87	1.77	1,000.00	1,170.76
33. Seabrook	255,721.00	6,239.59	2.44	8,825.55	2,072.04
34. South Hampton	221,600.00	3,257.52	1.47	2,500.00	382.22
35. So. Newmarket	378,044.00	5,670.66	1.50	718.52	166.25
36. Stratham	545,236.00	5,452.36	1.00	1,089.83	1,881.98
37. Windham	360,090.00	4,753.19	1.32	473.10	903.78
Aggregate	$25,482,025.00	$418,034.67	$1.64	$1,015,408.26	$313,395.41

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year,		Cost of public works.	Precinct debt.	Purpose for which debt was incurred.
1.	.....	$322.09	c	$104.52	.....	.....	
2.	.....	1,599.24	c	374.55	.....	.....	
3.	.....	20.16	d	52.26	.....	.....	
4.	$164.15	.....	b	1,057.23	.....	.....	
5.	.....	745.60	d	59.28	.....	.....	
6.	2,789.93	.....	a	114.74	.....	.....	Building town house and war debt.
7.	4,029.27	.....	a	3,038.97	.....	.....	Accident in highway.
8.	12,843.73	.....	b	411.48	.....	$1,500.00	
9.	275.80	.....	b	490.61	.....	.....	
10.	16,181.23	.....	a	10,397.56	.....	.....	Building academy and town house.
11.	71,909.89	.....	a	22,249.17	$23,281.00	.....	Street macadamizing.
12.	.....	567.54	c	6.55	.....	.....	
13.	2,994.95	.....	b	319.51	.....	.....	War.
14.	.....	687.16	c	316.12	.....	.....	
15.	5,944.13	.....	a	971.00	.....	.....	Building beach road.
16.	603.97	.....	a	269.62	.....	.....	Town hall and school houses.
17.	.....	121.69	c	40.37	.....	.....	
18.	5,741.55	.....	a	131.30	.....	.....	
19.	978.95	.....	b	1,910.30	.....	.....	War of the Rebellion
20.	25,167.03	.....	b	167.43	.....	.....	War.
21.	1,531.03	.....	a	2,185.98	.....	.....	Library building.
22.	18,080.06	.....	b	2,244.21	.....	.....	
23.	12,201.51	.....	b	962.61	.....	.....	War and town hall.
24.	120.55	.....	b	577.35	.....	.....	
25.	13,351.78	.....	a	357.20	.....	.....	
26.	10,330.81	.....	a	1,885.07	1,500.00	.....	Cemetery fence and roads.
27.	720.77	.....	a	176.12	.....	.....	
28.	479,861.30	.....	a	171,804.69	310,000.00	.....	Water-works and school building.
29.	.....	2,053.45	c	1,136.70	.....	.....	
30.	1,056.66	.....	b	435.74	.....	.....	Land for cemetery.
31.	13,220.76	.....	b	1,789.69	.....	.....	
32.	.....	170.76	d	247.43	.....	.....	
33.	6,753.51	.....	b	915.98	.....	.....	
34.	2,117.78	.....	a	25.80	.....	.....	War.
35.	552.27	.....	a	959.40	.....	.....	
36.	.....	792.15	d	729.89	.....	.....	
37.	.....	430.68	d	458.24	.....	.....	
	$709,523.37	$7,510.52	ad	$216,113.72	$334,781.00	$1,500.00	
			bc	13,260.95			
				*$202,852.77			

c Increase of assets. d Decrease of assets. * Net increase.

STRAFFORD

Towns.	Assessed Valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Barrington.....	$446,372.00	$13,391.16	$3.00	$22,526.85	$7,104.48
2. Dover.....	9,065,157.00	163,172.83	1.80	940,626.92	337,661.38
3. Durham.....	533,308.00	9,067.95	1.70	650.00	1,067.72
4. Farmington.....	1,341,875.00	32,947.95	2.45	65,493.00	18,083.80
5. Lee.....	302,700.00	4,036.00	1.33	1,373.64	2,881.52
6. Madbury.....	264,955.00	2,304.91	.87	24.00	997.90
7. Middleton.....	101,213.00	1,366.83	1.35	100.00	1,670.13
8. Milton.....	578,410.00	13,014.09	2.25	60,603.62	56,233.67
9. New Durham...	227,878.00	4,673.81	2.05	1,799.42	1,246.44
10. Rochester.....	3,660,656.00	69,525.00	1.90	271,305.64	68,236.81
11. Rollinsford	1,183,521.00	14,025.11	1.18	1,207.75	918.24
12. Somersworth*..	2,942,596.00	52,875.25	1.80	61,900.00	13,780.00
13. Strafford	479,852.00	8,829.28	1.84	8,275.47	7,607.88
Aggregate.....	$21,128,493.00	$389,230.17	$1.84	$1,435,886.31	$517,489.97

* No assessment of taxes made for 1893; $52,875.25 being the amount of taxes reported in 1892.

BELKNAP

Towns.	Assessed Valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Alton.....	$582,736.00	$12,354.00	$2.12	$3,223.02	$1,662.99
2. Barnstead.....	516,028.00	7,518.00	1.45	5,622.89	4,313.38
3. Belmont.....	507,638.00	7,868.39	1.55	.....	937.12
4. Centre Harbor..	242,242.00	2,613.34	1.08	24.00	1,406.87
5. Gilford.....	355,368.00	7,295.49	2.05	1,200.00	.....
6. Gilmanton	533,104.00	12,474.63	2.34	6,455.28	3,920.84
7. Laconia.....	4,418,312.00	74,592.75	1.69	128,678.44	30,909.33
8. Meredith.....	608,843.00	12,818.78	2.10½	1,623.32	8,413.73
9. New Hampton..	301,207.00	5,360.51	1.77	.....	1,541.17
10. Sanbornton.....	357,020.00	4,855.47	1.36	3,740.65	7,513.17
11. Tilton.....	753,568.00	15,271.81	2.03	8,249.25	5,654.62
Aggregate.....	$9,176,066.00	$163,023.17	$1.78	$158,816.85	$66,273.22

COUNTY.

	Net debt.	Surplus.	(*a*) Increase or (*b*) decrease during year.	Cost of public works.	Precinct debts.	Purpose for which debt was incurred.
1.	$15,422.37	.....	*b* $1,316.60	.....	.....	
2.	602,965.54	.....	*a* 1,319.66	$355,000.00	.....	Incidental expen's.
3.	.....	$417.72	*d* 1,603.28	.....	.....	
4.	47,409.20	.....	*a* 13,247.26	.....	$2,051.23	Increase of debt occasioned by dropping uncollected taxes formerly reported in assets.
5.	.....	1,507.88	*c* 403.96	.....	.....	
6.	.....	973.90	*d* 16.86	.....	.....	
7.	.....	1,570.13	*c* 704.90	.....	.....	
8.	4,369.95	.....	*a* 5,677.06	.....	5,200.00	School house.
9.	552.98	.....	*a* 966.44	.....	.....	Building bridges.
10.	203,068.83	.....	*a* 15,887.35	13,158.66	.....	Sewerage and extension of waterworks.
11.	289.51	.....	*a* 289.51	.....	.....	
12.	48,120.00	.....	*a* 3,949.15	8,249.89	.....	
13.	667.59	.....	*b* 1,075.35	.....	.....	
	$922,865.97	$4,469.63	*ad* $42,956.57 *bc* 3,500.81 † $39,455.76	$376,408.55	$7,251.23	

c Increase of assets. *d* Decrease of assets. † Net increase.

COUNTY.

	Net debt.	Surplus.	(*a*) Increase or (*b*) decrease during year.	Cost of public works.	Precinct debt.	Purpose for which debt was incurred.
1.	$1,560.03	.....	*a* $1,170.60	.....	$1,357.98	Building roads and school houses.
2.	1,309.51	.....	*a* 1,076.79	.....	.....	
3.	.....	$937.12	*d* 509.40	.....	.....	
4.	.....	1,382.87	*d* 574.76	.....	.....	
5.	1,200.00	.....	.....	.....	1,200.00	Town debt assumed by Laconia in uniting Lakeport.
6.	2,534.44	.....	*b* 1,921.51	.....	.....	
7.	97,769.11	.....	*a* 17,697.53	$59,987.90	.....	Sewerage and new streets and debts of Lakeport.
8.	.....	6,790.41	*c* 1,318.78	.....	.....	
9.	.....	1,541.17	*c* 355.22	.....	.....	
10.	.....	3,772.52	*c* 925.09	.....	.....	
11.	2,594.63	.....	*b* 2,192.90	.....	.....	War.
	$106,967.72	$14,424.09	*ad* $21,029.08 *bc* 6,713.50 * $14,315.58	$59,987.90	$2,557.98	

c Increase of assets. *d* Decrease of assets. * Net increase.

CARROLL

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Albany	$79,122.00	$2,729.85	$3.45	$769.86	$808.44
2. Bartlett	354,264.00	7,795.11	2.20	5,472.32	2,728.44
3. Brookfield	128,580.00	2,142.99	1.66	.....	665.71
4. Chatham	92,689.00	1,953.75	2.10	351.25	526.09
5. Conway	844,384.00	18,708.15	2.22	21,801.69	4,215.27
6. Eaton	136,672.00	2,869.65	2.10	615.48	534.06
7. Effingham	229,928.00	4,023.74	1.75	2,028.70	2,189.19
8. Freedom	266,397.00	4,848.42	1.82	1,139.85	1,235.15
9. Hart's Location	32,815.00	425.00	1.30	.....	150.00
10. Jackson	242,782.00	3,648.14	1.50	.....	3.00
11. Madison	146,468.00	3,514.71	2.40	2,286.10	1,101.10
12. Moultonborough	351,137.00	5,828.87	1.66	.....	1,212.21
13. Ossipee	510,170.00	13,265.35	2.60	4,356.22	2,301.19
14. Sandwich	459,017.00	12,485.26	2.72	28,107.44	1,517.98
15. Tamworth	373,642.00	8,658.00	2.32	4,240.61	2,752.71
16. Tuftonborough	261,060.00	7,237.77	2.77	7,982.00	565.62
17. Wakefield	604,128.00	9,061.92	1.50	3,256.78	4,049.65
18. Wolfeborough	1,179,646.00	26,738.87	2.27	119,819.00	5,255.57
Aggregate	$6,292,901.00	$135,935.55	$2.16	$202,227.30	$31,811.38

COUNTY.

Net debt.	Surplus.	(a) Increase or (b) decrease during year.		Cost of public works.	Purpose for which debt was incurred.
1.	$38.58	*d*	$277.11	.....	War.
2. $2,743.88	.....	*b*	928.66	.....	
3.	665.71	*d*	50.20	.....	Lower valuation of property.
4.	174.84	*d*	31.32	.....	
5. 17,586.42	.....	*b*	1,059.96	.....	
6. 81.42	.....	*b*	291.40	.....	
7.	160.49	*b*	762.34	.....	
8.	95.30	*b*	720.96	.....	
9.	150.00	*d*	50.00	.....	
10.	3.00	*b*	830.00	.....	
11. 1,185.00	.....	*a*	428.45	.....	Damage on highway.
12.	1,212.21	*d*	248.53	.....	
13. 2,055.03	.....	*b*	4,813.73	.....	
14. 26,589.46	.....	*b*	3,687.85	.....	War.
15. 1,487.90	.....	*b*	1,234.66	.....	War.
16. 7,416.38	.....	*b*	1,767.16	.....	War.
17.	792.87	*b*	3,161.40	.....	
18. 114,563.43	.....	*a*	25.97	$57,000.00	War, railroad, water-works and sewers.
$173,708.92	$3,293.00	*bc*	$19,258.12	$57,000.00	
		ad	1,111.58		
			*$18,146.54		

c Increase of assets. *d* Decrease of assets. * Net decrease.

MERRIMACK

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Allenstown	$648,332.00	$6,094.33	$0.94	$297.90	$1,013.72
2. Andover	461,490.00	5,537.68	1.20	.....	6,699.56
3. Boscawen	661,566.00	14,123.81	2.13	1,815.00	578.58
4. Bow	420,483.00	4,300.24	1.02	.....	888.03
5. Bradford	423,991.00	5,864.50	1.38	422.92	2,253.39
6. Canterbury	488,460.00	5,128.83	1.05	1,925.34	2,155.65
7. Chichester	295,846.00	4,734.89	1.60	4,404.66	2,630.22
8. Concord	10,890,960.00	204,585.27	1.88	992,791.52	90,445.36
9. Danbury	229,089.00	3,157.52	1.38	74.40	2,880.32
10. Dunbarton	346,248.00	3,785.88	1.09	475.15	1,864.84
11. Epsom	346,702.00	5,200.53	1.50	2,637.47	863.01
12. Franklin	2,353,710.00	37,659.36	1.60	160,500.00	9,783.16
13. Henniker	673,636.00	10,104.54	1.50	5,162.23	1,813.33
14. Hill	180,483.00	2,256.04	1.25	.....	1,113.52
15. Hooksett	682,556.00	8,942.08	1.31	.....	3,462.72
16. Hopkinton	872,223.00	14,163.00	1.62	1,600.00	2,808.63
17. Loudon	507,585.00	7,106.19	1.40	9,060.00	389.75
18. Newbury	271,218.00	2,712.18	1.00	1,644.02	1,202.64
19. New London	345,680.00	3,802.70	1.10	.....	1,809.36
20. Northfield	499,436.00	6,450.04	1.29	5,279.00	4,949.37
21. Pembroke	1,205,370.00	12,053.70	1.00	.....	968.68
22. Pittsfield	1,128,020.00	21,425.00	1.90	56,841.34	11,393.95
23. Salisbury	295,462.00	5,761.50	1.95	2,206.46	1,290.90
24. Sutton	351,102.00	5,196.30	1.48	1,623.75	3,195.70
25. Warner	692,955.00	9,701.27	1.40	26,586.67	455.52
26. Webster	286,448.00	2,864.48	1.00	.....	972.04
27. Wilmot	235,700.00	3,771.20	1.60	4,202.68	386.20
Aggregate	$25,794,751.00	$416,483.06	$1.61	$1,279,550.51	$158,274.15

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year.		Cost of public works.	Precinct debt.	Purpose for which debt was incurred.
1.	.....	$715.82	c	$66.49	.....	.....	
2.	.....	6,699.56	d	1,778.17	.....	.....	Highway expenditure.
3.	$1,236.42	.....	a	650.77	$70,000.00	.....	Water-works.
4.	.....	888.03	d	606.07	.....	.....	
5.	.....	1,830.47	c	1,474.47	.....	.....	
6.	.....	230.31	b	359.02	.....	.....	
7.	1,774.44	.....	b	1,763.76	.....	.....	
8.	902,346.16	.....	a	162,979.97	1,031,556.06	$832,335.03	Waterworks, sewers, school houses, and general expenses.
9.	.....	2,805.92	c	17.15	.....	.....	
10.	.....	1,389.69	d	74.25	.....	.....	
11.	1,774.46	.....	a	593.10	.....	.....	
12.	150,716.84	.....	a	35,234.67	125,000.00	100.00	Law suits for highway damages, new roads, waterworks, town hall, and schoolhouses.
13.	3,348.90	.....	b	1,253.44	.....	.....	
14.	.....	1,113.52	d	407.89	.....	.....	
15.	.....	3,462.72	c	792.81	.....	.....	
16.	.....	1,208.63	d	2,013.05	.....	.....	Repairs on highways and bridges.
17.	8,670.25	.....	b	1,191.77	.....	.....	
18.	441.38	.....	a	113.40	.....	.....	General expenses.
19.	.....	1,809.36	c	684.25	.....	.....	
20.	329.63	.....	b	1,377.15	.....	.....	
21.	.....	968.68	d	1,910.91	8,000.00	.....	
22.	45,441.39	.....	b	1,098.06	.....	4,000.00	War and railroad.
23.	915.56	.....	b	189.16	.....	.....	Cutting down Dimond and Twist hills.
24.	.....	1,571.95	d	374.77	.....	.....	
25.	26,131.15	.....	a	1,403.57	.....	.....	Current expenses of town.
26.	.....	972.04	c	498.98	.....	.....	
27.	3,816.48	.....	a	505.26	.....	.....	
	$1,146,943.06	$25,666.70	ad bc	$208,645.85 10,766.51	$1,234,556.06	$836,435.03	
			* $197,979.34				

c Increase of assets. *d* Decrease of assets. * Net increase.

HILLSBOROUGH

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Amherst	$637,314.00	$8,460.85	$1.33	$4,766.88	$4,175.84
2. Antrim	545,782.00	10,915.64	2.00	5,965.00	2,285.31
3. Bennington	229,375.00	6,079.00	2.65	7,800.00	1,603.66
4. Bedford	618,289.00	8,093.00	1.31	1,352.80	1,390.78
5. Brookline	300,824.00	4,963.35	1.65	581.10	718.75
6. Deering	207,366.00	3,722.43	1.80	3,029.19	2,045.78
7. Francestown	406,156.00	5,523.65	1.36	1,218.66	1,388.35
8. Goffstown	1,145,126.00	13,696.03	1.19	49,464.25	2,119.04
9. Greenfield,	262,486.00	4,121.66	1.57	2,800.00	1,508.30
10. Greenville	703,576.00	8,020.76	1.14	2,225.62	1,134.26
11. Hancock	324,564.00	4,608.87	1.42	22,816.67	21,280.63
12. Hillsborough	1,067,170.00	20,920.16	1.96	4,220.00	3,302.78
13. Hollis	632,840.00	7,911.15	1.25	8,000.94	1,152.78
14. Hudson	640,798.00	9,355.65	1.46	850.00	3,110.67
15. Litchfield	229,952.00	1,254.74	.55	.....	653.04
16. Lyndeborough	284,422.00	4,835.19	1.70	1,944.82	1,751.40
17. Manchester	27,439,742.00	507,640.68	1.85	976,050.00	143,116.83
18. Mason	315,808.00	3,789.69	1.20	1,146.22	928.75
19. Merrimack	573,106.00	7,259.07	1.27	3,769.18	1,819.02
20. Milford	1,764,982.00	30,006.54	1.70	94,279.00	4,991.56
21. Mont Vernon	294,598.00	3,829.61	1.30	1,700.00	1,438.54
22. Nashua	12,502,142.00	237,531.74	1.90	493,300.00	45,278.00
23. New Boston	582,868.00	7,636.01	1.31	4,850.00	2,222.07
24. New Ipswich	514,568.00	8,627.94	1.68	10,167.30	6,313.86
25. Pelham	485,569.00	4,855.69	1.00	355.19	1,489.72
26. Peterborough	1,458,155.00	16,768.78	1.15	46,013.29	2,976.75
27. Sharon	67,893.00	1,132.25	1.66	175.00	573,05
28. Temple	175,128.00	2,854.58	1.63	250.00	139.16
29. Weare	688,510.00	9,501.44	1.38	4,647.42	6,141.82
30. Wilton	972,614.00	14,589.21	1.50	24,261.71	579.19
31. Windsor	36,989.00	302.73	.82	.....	372.64
Aggregate	$56,108,722.00	$978,808.09	$1.73	$1,778,000.24	$268,002.33

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year.		Cost of public works.	Precinct debt.	Purpose for which debt was incurred.
1.	$591.04	.....	a	$2,003.83	.....	.....	Rebuilding town farm buildings.
2.	3,679.69	.....	b	493.55	.....	$2,200.00	
3.	6,196.34	.....	b	708.40	.....	.....	Railroad gratuity.
4.	.....	37.98	d	815.90	.....	.....	
5.	.....	137.65	d	3,729.13	.....	.....	
6.	983.41	.....	a	216.63	.....	.....	Building bridge.
7.	.....	169.69	d	245.04	.....	100.00	
8.	47,345.21	.....	b	517.46	.....	42,000.00	
9.	1,291.70	.....	b	349.48	.....	.....	
10.	1,091.36	.....	b	781.98	$869.29	.....	
11.	1,536.04	.....	b	367.07	.....	.....	
12.	917.22	.....	b	245.19	.....	.....	
13.	6,848.16	.....	b	52.24	.....	.....	Town house.
14.	.....	2,260.67	c	47.42	.....	.....	
15.	.....	653.04	d	113.94	.....	.....	
16.	193.42	.....	a	513.95	.....	.....	Breaking roads in winter.
17.	832,933.17	.....	b	40,858.48	2,751,611.00	.....	Water-works, school-houses, etc.
18.	217.47	.....	b	251.94	.....	.....	
19.	1,950.16	.....	a	3,078.04	.....	.....	Soldiers' monument.
20.	89,287.44	.....	b	421.00	70,253.59	.....	Water-works, sewers, and town charges.
21.	261.46	.....	a	1,082.75	.....	.....	Building new roads.
22.	448,022.00	.....	a	57,645.07	.....	.....	
23.	2,627.93	.....	a	162.95	182.50	.....	Building town houses and repairing roads.
24.	3,853.44	.....	b	1,007.85	.....	.....	
25.	.....	1,134.53	d	891.33	.....	.....	
26.	43,036.54	.....	b	4,508.46	.....	.....	Gratuity to railroads.
27.	.....	398.05	c	2.68	.....	.....	
28.	110.84	.....	a	208.10	.....	.....	Breaking roads during winter.
29.	.....	1,494.40	d	1,897.72	.....	.....	Selling histories less than cost.
30.	23,682.52	.....	b	5,355.51	.....	.....	
31.	.....	372.64	c	54.15	.....	.....	
	$1,516,656.56	$6,658.65	ad	$72,604.38	$2,822,916.38	$44,300.00	
			bc	56,022.86			
				*$16,581.52			

c Increase of assets. d Decrease of assets. * Net increase.

CHESHIRE

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Alstead	$503,004.00	$6,288.51	$1.25	$4,912.29	$1,892.60
2. Chesterfield	637,639.00	9,505.00	1.49	6,346.54	2,596.06
3. Dublin	512,823.00	6,564.18	1.28	13,302.65	14,772.40
4. Fitzwilliam	470,912.00	6,263.12	1.33	1,771.41	1,214.73
5. Gilsum	288,122.00	3,317.13	1.15	1,645.90	572.98
6. Harrisville	320,941.00	5,978.66	1.86	15,000.00	2,293.86
7. Hinsdale	1,011,357.00	22,250.15	2.20	15,408.96	9,794.26
8. Jaffrey	827,158.00	8,685.57	1.05	11,600.00	3,849.50
9. Keene	6,464,708.00	89,401.00	1.38	373,355.00	95,002.00
10. Marlow	276,464.00	1,852.74	.67	.....	572.71
11. Marlborough	636,185.00	8,909.75	1.40	7,324.17	2,052.75
12. Nelson	135,379.00	2,084.82	1.54	1,155.96	360.10
13. Richmond	220,372.00	3,085.04	1.40	728.55	1,476.02
14. Rindge	517,964.00	6,733.95	1.30	.....	1,262.92
15. Roxbury	69,012.00	717.72	1.04	.....	385.00
16. Swanzey	729,420.00	7,658.91	1.05	1,606.35	3,472.48
17. Sullivan	139,170.00	2,677.14	1.92	1,457.60	561.22
18. Surry	151,480.00	2,272.20	1.50	.....	1,025.00
19. Stoddard	170,020.00	2,720.37	1.60	5,552.29	3,568.49
20. Troy	489,724.00	6,759.33	1.38	891.95	1,616.10
21. Walpole	1,526,850.00	21,851.88	1.43	7,232.91	3,133.31
22. Westmoreland	502,317.00	5,525.49	1.10	2,088.23	1,057.54
23. Winchester	1,436,069.00	20,674.00	1.44	20,682.19	3,147.99
Aggregate	$18,037,090.00	$251,776.66	$1.39	$492,062.95	$155,680.02

SULLIVAN

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Acworth	$304,664.00	$5,120.15	$1.68	$2,725.00	$2,078.67
2. Cornish	476,984.00	7,773.83	1.63	278.67	1,150.77
3. Croydon	209,692.00	3,159.84	1.50	680.85	72.60
4. Charlestown	822,285.00	9,949.64	1.21	3,801.11	166.14
5. Claremont	3,038,630.00	53,175.68	1.75	129,749.00	32,479.56
6. Goshen	148,585.00	1,857.52	1.25	.....	984.76
7. Grantham	139,417.00	2,916.91	2.09	5,029.50	877.04
8. Langdon	224,094.00	2,496.61	1.10	.....	707.89
9. Lempster	180,013.00	3,338.47	1.85	1,378.58	1,421.50
10. Newport	1,436,614.00	28,732.28	2.00	106,400.51	1,960.74
11. Plainfield	529,792.00	7,734.96	1.46	6,449.48	2,825.30
12. Springfield	154,847.00	4,032.84	2.60	14,339.21	1,261.92
13. Sunapee	358,516.00	5,604.70	1.56	13,348.28	2,965.01
14. Unity	233,321.00	3,849.92	1.65	667.11	770.01
15. Washington	289,292.00	4,050.17	1.40	30.00	1,138.44
Aggregate	$8,546,746.00	$143,793.52	$1.68	$284,877.30	$50,860.35

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year.	Cost of public works.	Precinct debt.	Purposes for which debt was incurred.
1.	$3,019.69	.....	*b* $738.05	.....	.....	Town house.
2.	3,750.48	.....	*b* 1,089.44	.....	.....	Building bridge and new road.
3.	.....	$1,469.75	*d* 1,408.79	.....	.....	
4.	556.68	.....	*a* 1,530.09	.....	$1,537.50	School house.
5.	1,072.92	.....	*b* 103.84	.....	.....	
6.	12,706.14	.....	*b* 2,102.52	.....	.....	
7.	5,614.70	.....	*a* 814.18	$145.90	237.22	New iron bridge.
8.	7,750.50	.....	*b* 2,362.54	.....	.....	
9.	278,353.00	.....	*b* 10,276.00	372,822.65	.....	Railroad gratuity and highway, water-works, etc.
10.	.....	572.71	*d* 1,119.76	.....	.....	
11.	5,271.42	.....	*b* 531.12	.....	.....	
12.	795.86	.....	*a* 997.55	.....	.....	Building school house and repairing town house.
13.	.....	747.47	*d* 401.92	.....	.....	
14.	.....	1,262.92	*d* 114.06	.....	.....	
15.	.....	385.00	*d* 166.00	.....	.....	
16.	.....	1,866.13	*d* 203.14	.....	.....	
17.	896.38	.....	*a* 1,198.39	.....	.....	New iron bridge.
18.	.....	1,025.00	*d* 25.00	.....	.....	
19.	1,983.80	.....	*b* 1,339.62	.....	.....	War.
20.	.....	724.15	*b* 1,547.53	.....	.....	
21.	4,099.60	.....	*a* 1,293.07	.....	.....	Building bridges.
22.	1,030.69	.....	*a* 975.40	.....	.....	Bridges.
23.	17,534.20	.....	*a* 1,143.83	.....	.....	General expenses.
	$344,436.06	$8,053.13	*bc* $20,090.66 *ad* 11,391.18	$372,968.55	$1,774.72	
			† $8,699.48			

† Net decrease.

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year.	Purpose for which debt was incurred.
1.	$646.33	.....	*b* $388.25	War bounties.
2.	.....	$872.10	*d* 222.26	
3.	608.25	.....	*a* 617.88	
4.	3,634.97	.....	*a* 3,716.97	
5.	97,269.44	.....	*b* 352.59	Railroad and war.
6.	.....	984.76	*c* 323.64	
7.	4,152.46	.....	*b* 888.29	
8.	.....	707.89	*d* 343.77	
9.	.....	42.92	*b* 446.39	
10.	104,439.77	.....	*a* 1,443.74	War, railroad, fire apparatus, and general expenses.
11.	3,624.18	.....	*b* 887.37	
12.	13,077.29	.....	*b* 21.06	War.
13.	10,383.27	.....	*a* 935.64	
14.	.....	102.90	*b* 159.19	
15.	.....	1,108.44	*c* 451.05	
	$237,835.96	$3,819.01	*ad* $7,280.26 *bc* 3,917.83	
			* $3,362.43	

c Increase of assets. *d* Decrease of assets. * Net increase.

GRAFTON

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Alexandria	$223,200.00	$3,733.18	$1.67	$304.64	$1,398.63
2. Ashland	488,067.00	7,711.45	1.58	2,991.45	683.45
3. Bath	510,327.00	10,002.40	1.96	10,740.00	6,735.54
4. Benton	100,009.00	1,912.23	1.91	1,564.60	1,577.49
5. Bethlehem	721,347.00	13,315.59	1.84	11,600.00	2,312.13
6. Bridgewater	112,473.00	2,249.48	2.00	3,622.22	1,361.70
7. Bristol	676,070.00	13,654.14	2.02	4,382.25	2,692.96
8. Campton	346,030.00	8,650.75	2.50	19,048.29	5,909.29
9. Canaan	515,927.00	8,099.80	1.57	4,620.85	1,571.04
10. Dorchester	115,170.00	3,743.02	3.25	17,066.05	4,580.62
11. Easton	119,420.00	1,493.45	1.25	401.13	1,260.98
12. Ellsworth	29,325.00	965.92	3.29	.....	250.00
13. Enfield	587,185.00	9,759.07	1.66	4,611.81	4,607.25
14. Franconia	390,433.00	5,465.63	1.40	4,441.57	1,606.64
15. Grafton	287,020.00	5,337.69	1.86	828.16	2,411.16
16. Groton	117,062.00	3,244.83	2.77	2,369.05	1,180.58
17. Hanover	1,042,402.00	14,369.04	1.38	3,698.73	3,608.44
18. Haverhill	1,240,618.00	14,425.57	1.18	1,864.54	7,696.29
19. Hebron	88,696.00	1,623.22	1.83	1,111.92	1,111.34
20. Holderness	234,056.00	4,751.52	2.03	.....	1,751.09
21. Landaff	224,188.00	2,671.39	1.19	.....	673.71
22. Lebanon	2,267,524.00	39,611.16	1.75	94,875.00	14,233.30
23. Lincoln	124,513.00	1,170.42	.94	.....	111.84
24. Lisbon	991,889.00	21,517.81	2.17	36,900.00	2,301.67
25. Littleton	1,571,552.00	33,592.00	2.14	3,284.75	2,160.91
26. Livermore	99,310.00	914.98	.92	.....	.....
27. Lyman	188,672.00	2,906.14	1.54	389.22	800.92
28. Lyme	475,266.00	5,225.85	1.10	1,508.55	1,837.21
29. Monroe	293,252.00	3,460.02	1.18	8,695.55	1,316.88
30. Orange	67,339.00	1,448.03	2.15	517.32	1,372.05
31. Orford	402,329.00	6,039.48	1.50	4,700.03	3,254.72
32. Piermont	361,980.00	5,787.26	1.60	2,345.75	720.60
33. Plymouth	764,888.00	15,451.08	2.02	659.41	1,586.76
34. Rumney	293,551.00	7,338.78	2.50	3,489.67	1,291.62
35. Thornton	187,812.00	6,672.51	3.55	12,406.00	5,288.96
36. Warren	274,790.00	3,709.66	1.35	312.01	1,957.55
37. Waterville	49,498.00	583.40	1.17	.....	842.57
38. Wentworth	207,970.00	3,787.10	1.82	309.00	1,209.13
39. Woodstock	151,328.00	3,667.54	2.43	11,254.92	3,034.14
Aggregate	$16,942,488.00	$300,062.59	$1.77	$276,914.44	$98,301.16

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year.		Cost of public works.	Precinct debt.	Purpose for which debt was incurred.
1.	.....	$1,093.99	*d*	$559.11	.....	.....	
2.	$2,308.00	.....	*a*	229.55	.....	.....	Sidewalks and town library.
3.	4,004.46	.....	*b*	2,543.11	.....	.....	War and highways.
4.	.....	12.89	*b*	15.21	.....	.....	
5.	9,287.87	.....	*b*	529.63	.....	.....	War.
6.	2,260.52	.....	*b*	510.95	.....	.....	
7.	1,689.29	.....	*b*	466.51	.....	.....	
8.	13,139.00	.....	*b*	1,952.83	.....	.....	
9.	3,049.81	.....	*b*	343.64	.....	.....	
10.	12,485.43	.....	*b*	961.54	.....	.....	War.
11.	.....	859.85	*d*	21.18	.....	.....	Extra outlay on highway.
12.	.....	250.00	*b*	364.08	.....	.....	
13.	4.56	.....	*a*	1,960.05	.....	.....	Building bridge and highway expenditure.
14.	2,834.93	.....	*b*	676.19	.....	.....	General expenses.
15.	.....	1,583.00	*a*	697.02	.....	.....	
16.	1,188.47	.....	*b*	326.90	.....	.....	
17.	90.29	.....	*b*	342 64	.....	.....	
18.	.....	5,831.75	*c*	2,099.79	.....	.....	
19.	.58	.....	*d*	614.81	.....	.....	Bridge.
20.	.....	1,751.09	*c*	117.58	.....	.....	
21.	.....	673.71	*d*	349.50	.....	.....	
22.	80,641.70	.....	*a*	9,468.16	$20,000.00	$63,046.56	Sewers, sidewalks, and water-works.
23.	.....	111.84	*d*	40.15	.....	.....	
24.	34,598.33	.....	*a*	318.99	354.00	27,000.00	Increase of precinct debt, iron bridge, and school house.
25.	1,123.84	.....	*b*	715.18	.....	1,500.00	
26.	.....	.....	.....	.....	.....	.....	
27.	.....	411.70	*a*	185.59	.....	.....	
28.	.....	328.66	*d*	877.79	.....	.....	
29.	7,378.67	.....	*b*	15.35	.....	.....	Washout in road.
30.	.....	854.73	*c*	215.55	.....	.....	
31.	1,445.31	.....	*a*	389.08	.....	.....	Repairs on highways and bridges.
32.	1,625.15	.....	*b*	1,156.05	.....	.....	War.
33.	.....	927.35	*c*	564.37	.....	.....	
34.	2,198.05	.....	*a*	5,780.35	.....	.....	To pay executions and costs of suits against the town.
35.	7,117.04	.....	*b*	1,462.03	.....	.....	War.
36.	.....	1,645.54	*d*	397.23	.....	.....	
37.	.....	842.57	*d*	1.78	.....	.....	
38.	.....	900.13	*b*	1,166.35	.....	.....	
39.	8,220.78	.....	*b*	745.84	.....	622.82	
	$196,692.08	$18,078.80	*ad*	$21,890.34	$20,354.00	$92,169.38	
			bc	17,291.32			
				* $4,599.02			

c Increase of assets. *d* Decrease of assets. * Net increase.

COÖS

Towns.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.	Assets.
1. Berlin	$1,390,940.00	$32,826.18	$2.36	$76,157.38	$8,390.79
2. Carroll	276,962.00	5,599.33	2.02	2,471.59	2,899.62
3. Clarksville	141,430.00	1,440.67	1.02	.....	333.54
4. Colebrook	820,612.00	9,844 73	1.20	.....	808.46
5. Columbia	267,093.00	4,255.92	1.59	1,693.85	1,964.67
6. Dalton	156,220.00	6,264.42	4.01	24,095.96	6,443.53
7. Dummer	142,206.00	3,199.68	2.25	5,447.12	1,740.54
8. Errol	120,006.00	3,419.07	2.85	2,215.00	1,381.85
9. Gorham	478,780.00	9,066.04	1.89	1,592.87	760.78
10. Jefferson	305,212.00	6,714.66	2.20	2,235.00	983.93
11. Lancaster	1,334,964.00	27,238.20	2.04	12,471.45	4,887.54
12. Milan	280,146.00	7,283.79	2.60	11,549.30	2,762.11
13. Northumberland	572,949.00	8,880.71	1.55	373.61	547.11
14. Pittsburg	363,705.00	5,927.44	1.63	3,279.06	779.89
15. Randolph	63,300.00	1,552.80	2.45	1,690.21	1,044.48
16. Shelburne	127,742.00	2,018.25	1.58	281.00	785.96
17. Stark	290,588.00	4,358.82	1.50	4,435.12	2,658.22
18. Stratford	400,200.00	5,209.61	1.30	1,712.87	1,991.57
19. Stewartstown	359,899.00	4,859.69	1.35	6,290.16	998.20
20. Whitefield	684,286.00	11,974.90	1.75	64,397.90	5,887.60
21. Wentworth's Location.	22,432.00	485.66	2.16	.....	.....
UNINCORPORATED PLACES.					
Bean's Grant	$5,000.00	$21.16		.....	.....
Bean's Purchase	60,000.00	243.29		.....	.....
Cambridge	50,000.00	201.02		.....	.....
Chandler's Purchase	2,000.00	10.58		.....	.....
Crawford's Purchase	30,000.00	116.39		.....	.....
Cutt's Grant	7,500.00	31.73		.....	.....
Dixville	25,000.00	105.80		.....	.....
Dix's Grant	8,000.00	31.73		.....	.....
Erving's Grant	5,000.00	21.16		.....	.....
Green's Grant	55,000.00	222.19		.....	.....
Gilmanton and Atkinson Academies' Grant	30,000.00	116.39	.40	.....	.....
Kilkenny	40,000.00	158.74		.....	.....
Low and Burbank's Grant	20,000.00	84.57		.....	.....
Martin's Location	5,000.00	21.16		.....	.....
Millsfield	40,000.00	158.74		.....	.....
Odell	60,000.00	243.29		.....	.....
Pinkham's Grant	5,000.00	21.16		.....	.....
Sargent's Purchase	30,000.00	116.39		.....	.....
Second College Grant	40,000.00	158.74		.....	.....
Success	50,000.00	201.02		.....	.....
Thompson and Meserve's Purchase	30,000.00	116.39		.....	.....
Aggregate	$9,197,172.00	$164,822.21	$1.79	$222,389.45	$48,050.39

COUNTY.

	Net debt.	Surplus.	(a) Increase or (b) decrease during year.		Cost of public works.	Precinct debt.	Purpose for which debt was incurred.
1.	$67,766.59	.....	*a*	$41,882.31	$32,720.49	.....	Sewers and highways.
2.	.....	$428.03	*c*	174.29	.....	.....	
3.	.....	333.54	*b*	934.72	.....	.....	
4.	.....	808.46	*d*	1,717.46	.....	.....	
5.	.....	270.82	*b*	522.31	.....	.....	
6.	17,652.43	.....	*b*	1,021.69	.....	.....	War.
7.	3,706.58	.....	*b*	466.75	.....	.....	
8.	833.15	.....	*b*	750.17	.....	.....	
9.	832.09	.....	*b*	426.72	.....	.....	Building bridge and road.
10.	1,251.07	.....	*b*	656.56	.....	.....	
11.	7,583.91	.....	*b*	4,936.58	900.00	$1,200.00	
12.	8,787.19	.....	*b*	1,247.18	.....	.....	
13.	.....	173.50	*b*	191.83	1,224.54	.....	
14.	2,499.17	.....	*a*	1,892.51	.....	.....	Old debt, balance, litigation and settlement of suits.
15.	645.73	.....	*a*	264.41	.....	.....	Town charges.
16.	.....	504.96	*c*	224.74	.....	.....	
17.	1,776.90	.....	*a*	346.87	.....	.....	Building bridges and school house.
18.	.....	278.70	*d*	281.93	.....	.....	
19.	5,291.96	.....	*a*	1,727.15	1,800.00	.....	Town house, sewers, etc.
20.	58,510.30	.....	*a*	54,869.26	.....	56,000.00	Debt of fire district.
21.	.....	.....	.....		.....	.....	
	$177,137.07	$2,798.01	*ad*	$102,981.90	$36,645.03	$57,200.00	
			bc	11,553.54			
				* $91,428.36			

c Increase of assets. *d* Decrease of assets. * Net increase.

RECAPITULATION

Counties.	Assessed valuation.	Taxes assessed for all purposes.	Tax on $100.	Total debt.
1. Rockingham	$25,482,025.00	$418,034.67	$1.64	$1,015,408.26
2. Strafford	21,128,493.00	389,230.17	1.80	1,435,886.31
3. Belknap	9,176,066.00	163,023.17	1.78	158,816.85
4. Carroll	6,292,901.00	135,935.55	2.16	202,227.30
5. Merrimack	25,794,751.00	416,483.06	1.61	1,279,550.51
6. Hillsborough	56,108,722.00	978,808.09	1.73	1,778,000.24
7. Cheshire	18,037,090.00	251,776.66	1.39	492,062.95
8. Sullivan	8,546,746.00	143,793.52	1.68	284,877.30
9. Grafton	16,942,488.00	300,062.59	1.77	276,914.44
10. Coös	9,197,172.00	164,822.21	1.79	222,389.45
Aggregate	$196,706,454.00	$3,361,969.69	$1.71	$7,146,133.61

BY COUNTIES.

Assets.	Net debt.	Surplus.	(*a*) Increase or (*b*) decrease during year.	Cost of public works.	Precinct debt.
$313,395.41	$709,523.37	$7,510.52	*a* $202,852.77	$334,781.00	$1,500.00
517,489.97	922,865.97	4,469.63	*a* 39,455.76	376,408.55	7,251.23
66,273.22	106,967.72	14,424.09	*a* 14,315.58	59,987.90	2,557.98
31,811.38	173,708.92	3,293.00	*b* 18,146.54	57,000.00	.....
158,274.15	1,146,943.06	25,666.70	*a* 197,979.34	1,234,556.06	836,435.03
268,002.33	1,516,656.56	6,658.65	*a* 16,581.52	2,822,916.38	44,300.00
155,680.02	344,436.06	8,053.13	*b* 8,699.48	372,968.55	1,774.72
50,860.35	237,835.96	3,819.01	*a* 3,362.43	.....	.....
98,301.16	196,692.08	18,078.80	*a* 4,599.02	20,354.00	92,169.38
48,050.39	177,137.07	2,798.01	*a* 91,428.36	36,645.03	57,200.00
$1,708,138.38	$5,532,766.77	$94,771.54	*a* $570,574.78	$5,315,617.47	$1,043,188.34
			b 26,846.02		
			* $543,728.76		

* Net increase.

STATEMENT OF THE FINANCIAL CONDITION

Of the several counties at the close of the fiscal year ending December 31, 1892, compiled in accordance with the provisions of chapter 16 and chapter 27 of the Public Statutes.

Counties.	Total debt.	Cash on hand.	Net debt (*a*) and surplus (*b*).	Valuation of county buildings and farm.	Valuation of stock and personal property.	Purpose for which debt was incurred.
Rockingham....	$140,000.00	$17,992.03	*a* $122,007.97	$191,500.00	$29,276.62	New county buildings and refunding bonds.
Strafford	180,000.00	48,325.89	*a* 131,674.11	122,500.00	22,588.83	Building court house and jail. General expenses.
Belknap	31,217.52	12,590.03	*a* 18,627.49	40,000.00	10,273.83	Support of paupers and court expenses.
Carroll.....	40,533.33	23,264.42	*a* 17,268.91	20,000.00	6,243.82	
Merrimack.....	52,000.00	10,110.06	*a* 41,889.94	85,000.00	17,406.96	Building and repairs.
Hillsborough ...	134,608.66	25,100.71	*a* 109,507.95	68,875.00	32,619.56	County expenses.
Cheshire.....	25,000.00	28,150.00	*b* 3,150.00	117,000.00	7,567.37	Building jail and house of correction.
Sullivan.....	3,000.00	11,133.81	*b* 8,133.81	45,458.23	7,769.74	Copying records damaged by fire.
Grafton.....	53,311.48	15,131.34	*a* 38,180.14	78,500.00	10,184.25	Running expenses before July, 1889, and building court houses.
Coös.....	32,904.61	8,073.87	*a* 24,330.74	45,000.00	10,027.70	Building courthouse and current expenses.
Totals.....	$692,575.60	$199,872.16	*a* $503,987.25	$813,833.23	$153,958.68	
			b 11,283.81			

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VALUATION AND TAXATION

OF THE

STATE OF NEW HAMPSHIRE,

FOR THE YEAR 1893.

COMPILED BY THE SECRETARY OF THE STATE BOARD OF EQUALIZATION.

BOARD.

JOHN M. HILL, *Chairman*	CONCORD.
CHARLES A. DOLE, *Secretary*	LEBANON.
JEWETT CONNER	EXETER.
JOHN M. PARKER	GOFFSTOWN.
EDWIN W. DREW . .	STEWARTSTOWN (P. O., COLEBROOK).

VOLUME I, PART IV.

CONCORD:
EDWARD N. PEARSON, PUBLIC PRINTER.
1893.

STATE BOARD OF EQUALIZATION.

CONCORD, N. H., October 2, 1893.

The Secretary of the Board of Equalization has made the usual compilation of the Valuation and Taxation of the state from the inventories and returns of date April 1, 1893. It presents the following summary of valuation, and comparison is made with the previous year:

	1893.	1892.
Amount of Inventories	$196,117,060	$191,804,024
Savings Bank Deposits	77,024,282	73,098,476
Insurance Capital	1,675,000	1,525,000
	$274,816,342	$266,427,500

Net increase for 1893, $8,388,842.

Subjoined is the table, by counties, of valuation and taxes assessed in all cities and towns for 1893 compared with 1892:

	1893.		1892.	
	Valuation.	Taxes.	Valuation.	Taxes.
Rockingham	$25,482,475	$418,034.67	$25,011,097	$400,082.33
Strafford	21,127,766	336,354.92	21,085,494	383,004.51
Belknap	9,177,111	163,023.17	8,677,219	159,267.97
Carroll	6,289,336	135,935.55	6,327,876	134,482.86
Merrimack	25,798,541	416,483.12	25,476,791	383,960.85
Hillsborough	56,108,697	978,808.30	54,131,995	933,743.76
Cheshire	18,036,998	251,767.50	17,871,500	236,394.98
Sullivan	8,564,076	142,732.38	8,320,310	136,932.93
Grafton	16,932,452	297,729.78	16,756,929	280,266.79
Coös	8,599,608	162,261.24	8,144,813	147,189.90
	$196,117,060	$3,303,130.63	$191,804,024	$3,195,326.88
City of Somersworth		*52,875.24		
		$3,356,005.87		

The increase in the inventories has been made almost wholly in the cities and large towns. Manchester leads off with $1,500,000; Laconia, $450,000; Nashua, $400,000; Portsmouth, $300,000. The agricultural towns, in many cases, show a decrease.

The following table shows the valuation and taxes for the last ten years:

	Valuation.	Taxes.		Valuation.	Taxes.
1884	$216,123,044	$3,222,732.08	1889	$241,766,633	$3,588,353.51
1885	218,122,554	3,035,878.10	1890	250,530,530	3,749,413.32
1886	222,106,281	3,140,512.23	1891	259,191,770	3,841,310.63
1887	228,234,851	3,147,790.01	1892	266,427,500	3,941,561.64
1888	235,998,455	3,577,212.60	1893	274,816,342	4,142,998.69

*The valuation of Somersworth, Strafford county, is included in the above table, as shown in the inventory returned: the tax for this year has not been assessed and returned, by reason of the unsettled condition of municipal affairs in that city. We have therefore taken the tax for 1892 ($52,875.24) to complete the tables.

The valuation covers savings bank deposits and insurance capital, and the taxes include the amount (1 per cent.) on these properties.

Increase for the decade, $58,693,298, or in slight excess of 27 per cent.; of which $35,338,150 is in savings banks, the deposits having nearly doubled; $1,675,000 insurance capital, of which none existed, as reported to the Board, at the commencement; and the balance, $21,680,148, from properties covered by the inventories.

The rate per cent. of taxation, including savings banks and insurance, on each $100 has been as follows:—1884, $1.49 6-10; 1885, $1.49; 1886, $1.42; 1887, $1.38; 1888, $1.52; 1889, $1.52; 1890, $1.48; 1891, $1.50; 1892, $1.48; 1893, $1.50.

The savings bank deposits were, in 1884, $41,686,132; in 1885, $43,402,663; in 1886, $46,974,722; in 1887, $50,361, 325; in 1888, $53,902,934; in 1889, $57,738,572; in 1890, $63,846,977; in 1891, $69,834,914; in 1892, $73,098,476; in 1893, $77,024,282.

The insurance capital was, in 1888, $1,255,000; in 1889, $1,415,000; in 1890, $1,305,000; in 1891, $1,325,000; in 1892, $1,525,000; in 1893, $1,675,000.

The railroad tax is $307,790.15 against $301,681.10 for 1892; telegraph tax, $2,931.00 against $2,891.92 for 1892; telephone tax, $2,199.00 against $2,088.28 for 1892; total, $312,920.15 against $306,661.30; increase, $6,258.85.

The Dover & Winnipesaukee and the Wolfeborough railroads have been consolidated with the Boston & Maine, and the tax assessed to the latter corporation. The Manchester & Keene, as last year, is taxed to the Concord & Montreal and the Boston & Lowell in equal amounts ($60,000 each). The Laconia & Lakeport Horse Railway is taxed for the first time.

The expense of the Railroad Commission is met by a tax levied upon the gross receipts of the railroads. Its amount is $7,440.38 against $5,468.99 in 1892 and $7,424.03 in 1891. The decrease in 1892 arose from the non-payment of salary of one member of the board, occasioned by a long existing vacancy.

The entire sum of taxation of the state for 1893 is as follows:

Taxes in cities and towns			$3,356,005.87
"	by state,	savings banks	770,242.82
"	"	insurance	16,750.00
"	"	railroads	307,790.15
"	"	telegraphs	2,931.00
"	"	telephones	2,199.00
			$4,455,918.84

JOHN M. HILL, *Chairman.*

C. A. DOLE, *Secretary.*

STATISTICAL TABLES.

NAMES.	Valuation of road, rolling stock, and equipments.	Amount taxed in towns.	Valuation exclusive of amount taxed in towns.	Amount of tax assessed.
Boston & Lowell	$60,000	$9,150	$50,850	$762.75
Boston & Maine	3,350,000	84,640	3,265,360	48,980.40
Concord & Claremont	600,000	3,900	596,100	8,941.50
Concord & Montreal	6,060,000	148,250	5,911,770	88,676.55
Concord & Portsmouth	600,000	.....	600,000	9,000.00
Connecticut River	225,000	14,450	210,550	3,158.25
Eastern	425,000	75,266	349,734	5,246.01
Fitchburg	1,635,000	24,900	1,610,100	24,151.50
Grand Trunk	500,000	10,500	489,500	7,342.50
Manchester & Lawrence	1,500,000	3,296	1,496,704	22,450.56
Manchester & North Weare	80,000	.....	80,000	1,200.00
Mount Washington	150,000	.....	150,000	2,250.00
Nashua, Acton & Boston	20,000	1,000	19,000	285.00
Nashua & Lowell	400,000	27,700	372,300	5,584.00
Northern	2,250,000	11,300	2,238,700	33,580.50
Peterborough	50,000	800	49,200	738.00
Peterborough & Hillsborough	70,000	.....	70,000	1,050.00
Portsmouth & Dover	100,000	.....	100,000	1,500.00
Portland & Ogdensburg	300,000	500	299,500	4,492.50
Portland & Rochester	30,000	.....	30,000	450.00
Profile & Franconia Notch	52,000	.....	52,000	780.00
Sullivan County	700,000	.....	700,000	10,500.00

Suncook Valley	140,000	3,600	136,400	2,046.00
West Amesbury Branch	20,000	.....	20,000	300.00
Whitefield & Jefferson	125,000	.....	125,000	1,875.00
Wilton	250,000	2,150	247,850	3,717.75
Worcester, Nashua & Rochester	1,200,000	13,900	1,186,100	17,791.50
Concord Street Railway	20,000	.....	20,000	300.00
Laconia & Lake Village Horse Railroad	16,000	8,375	7,625	114.38
Manchester Street Railway	35,000	.....	35,000	525.00
Totals	$20,963,000	$443,657	$20,519,343	$307,790.15

APPORTIONMENT OF SALARIES AND EXPENSES OF RAILROAD COMMISSIONERS FOR YEAR ENDING JUNE 1, 1893.

NAMES.	Gross receipts.	Proportion of expenses.
Boston & Maine	$2,936,000	$3,107.40
Concord & Montreal	2,510,000	2,656.52
Connecticut River	73,000	77.26
Fitchburg	625,000	661.48
Grand Trunk	292,000	309.05
Mount Washington	29,000	30.69
Portland & Ogdensburg	165,000	174.63
Portland & Rochester	15,000	15.87
Profile & Franconia Notch	21,000	22.23
Sullivan County	230,000	243.43
West Amesbury Branch	4,000	4.23
Concord Street	41,000	43.39
Laconia Street	14,000	14.82
Manchester Street	75,000	79.38
Totals	$7,030,000	$7,440.38

Other roads, names not enumerated, are included either in Boston & Maine or Concord & Montreal systems.

VALUATION AND ASSESSMENT OF TELEGRAPHS, 1893.

NAMES.	Valuation.	Tax.
American	$2,000	$30.00
Chester & Derry	400	6.00
Commercial Union	8,000	120.00
Direct U. S. Cable	10,000	150.00
Great Northwestern	5,000	75.00
Maine	10,000	150.00
Western Union	160,000	2,400.00
Totals	$195,400	$2,931.00

VALUATION AND ASSESSMENT OF TELEPHONES, 1893.

NAMES.	Valuation.	Tax.
Brattleboro & Chesterfield	$500	$7.50
Brattleboro & Hinsdale	1,000	15.00
Colebrook & Connecticut Lake	600	9.00
N. E. Telephone & Telegraph	141,000	2,115.00
Plymouth & Campton	3,500	52.50
Totals	$146,600	$2,199.00

TABLE NO. 1.

Number of Ratable Polls, Valuation, and Amount of Taxes in each Town, as returned by the Assessors for 1893.

ROCKINGHAM COUNTY.

Towns.	POLLS.		ASSES AND MULES.		HOGS.		CARRIAGES.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Atkinson	126	$12,600	....	.....	7	$70	....	$4,000	.....	.....	.....	.....
Auburn	158	15,800	....	.....	9	84	1	100	.....	$500	.....	.....
Brentwood	183	18,300	....	.....	31	792	2	125	.....	700	.....	.....
Candia	279	27,900	....	.....	6	75	13	750	.....	700	.....	.....
Chester	225	22,500	....	.....	16	160	7	490	.....	6,200	.....	.....
Danville	179	17,900	1	$30	8	75	2	151	.....	.....	.....	.....
Deerfield	344	34,400	....	.....	31	270	4	210	.....	4,524	$1,000	.....
Derry	628	62,800	....	.....	36	340	38	2,102	.....	24,720	.....	$4,374
East Kingston	119	11,900	....	.....	6	60	....	.....	.....	100	.....	.....
Epping	412	41,200	....	.....	6	76	16	985	.....	9,900	.....	.....
Exeter	856	85,600	....	.....	15	120	106	9,120	$12,100	63,400	1,500	.....
Fremont	145	14,500	....	.....	10	215	15	850	.....	300	.....	.....
Greenland	146	14,600	2	50	....	.....	15	725	.....	22,999	.....	.....
Hampstead	222	22,200	....	.....	13	172	11	775	.....	2,500	.....	.....
Hampton	332	33,200	....	.....	4	40	12	690	.....	1,900	.....	.....
Hampton Falls	155	15,500	2	25	35	506	29	1,890	2,000	1,000	.....	.....
Kensington	137	13,700	....	.....	....	.....	6	405	.....	2,600	.....	.....

Kingston	287	28,700	....	.....	....	.....	5	350	.....	2,300	.....	.....
Londonderry	319	31,900	....	.....	....	.....	23	1,675	.....	6,600	.....	.....
Newcastle	150	15,000	....	.....	....	.....	56	5,696	.....	5,700	.....	.....
Newington	98	9,800	....	.....	12	120	22	1,400	.....	3,783	.....	.....
Newmarket	698	69,800	....	.....	7	70	37	2,254	350	27,500	.....	9,500
Newton	287	28,700	....	.....	9	116	28	1,505	.....	.....	.....	.....
North Hampton	201	20,100	....	.....	24	228	37	2,825	4,100	500	.....	.....
Northwood	370	37,000	....	.....	8	72	31	1,990	.....	8,900	.....	.....
Nottingham	253	25,300	....	.....	10	75	....	.....	.....	3,800	.....	300
Plaistow	259	25,900	....	.....	32	330	14	750	.....	.....	.....	.....
Portsmouth	2,750	275,000	....	.....	40	380	261	38,015	161,070	665,404	.....	191,694
Raymond	317	31,700	....	.....	3	30	....	.....	.....	300	.....	.....
Rye	257	25,700	....	.....	....	.....	73	5,246	.....	8,566	.....	.....
Salem	422	42,200	....	.....	3	36	17	1,040	.....	1,000	.....	.....
Sandown	123	12,300	....	.....	7	75	5	250	.....	2,000	3,000	.....
Seabrook	392	39,200	....	.....	....	.....	2	135	.....	.....	.....	.....
South Hampton	88	8,800	....	.....	6	70	8	415	.....	.....	.....	.....
South Newmarket	219	21,900	....	.....	...	.....	15	986	.....	6,066	.....	.....
Stratham	159	15,900	3	60	....	.....	14	1,125	14,075	19,228	3,700	.....
Windham	169	16,900	....	.....	4	35	12	835	.....	.....	.....	.....
Totals	12,464	$1,246,400	8	$165	398	$4,692	937	$89,860	$193,695	$903,690	$9,200	$205,868

TABLE NO. 1.—*Continued.*

ROCKINGHAM COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Atkinson	$16,100	$3,060	$600	$240,150	$297,442	$3,569.31	$1.20
Auburn	13,855	6,655	3,100	231,276	290,581	3,722.61	1.28
Brentwood	15,800	15,853	13,100	210,465	309,168	3,246.26	1.05
Candia	1,800	10,050	1,000	278,662	346,975	5,204.63	1.50
Chester	9,225	7,000	4,300	293,372	372,101	4,651.42	1.25
Danville	.....	11,600	3,150	157,609	203,006	3,045.09	1.50
Deerfield	20,478	11,272	4,450	329,408	456,416	8,958.00	1.96
Derry	6,940	46,010	24,150	887,169	1,108,089	19,816.53	1.78
East Kingston	2,550	12,100	4,800	185,646	232,202	4,333.00	1.86
Epping	21,700	57,500	17,400	527,494	712,101	10,756.15	1.51
Exeter	430,100	131,350	70,000	2,017,499	2,873,099	54,588.00	1.90
Fremont	.....	26,285	10,500	181,118	250,100	3,101.35	1.24
Greenland	6,950	500	.....	297,350	370,424	4,510.65	1.22
Hampstead	10,400	14,825	4,100	273,873	347,686	4,172.23	1.20
Hampton	14,850	8,450	650	526,685	647,915	8,098.87	1.25
Hampton Falls	4,122	4,300	2,370	231,265	289,346	3,616.41	1.25
Kensington	3,200	4,745	.....	211,622	260,106	3,524.50	1.35
Kingston	11,730	13,259	2,200	277,948	356,210	6,234.48	1.75
Londonderry	6,494	14,900	7,200	408,287	522,400	7,836.00	1.50
Newcastle	.....	3,106	.....	175,954	211,870	4,121.92	1.94

Newington	3,750	4,900	.....	178,611	224,927	2,143.54	.95
Newmarket	20,246	117,190	364,910	633,466	1,275,120	22,059.57	1.73
Newton	6,400	23,740	3,000	299,937	382,437	6,960.35	1.82
North Hampton	5,300	4,100	3,825	525,228	598,745	6,587.26	1.10
Northwood	21,265	24,795	3,100	384,666	515,898	9,139.69	1.77
Nottingham	4,000	34,026	12,900	238,356	345,598	3,628.78	1.05
Plaistow	2,500	19,350	2,500	253,550	325,427	4,484.58	1.38
Portsmouth	197,907	630,244	147,700	5,404,744	7,833,490	143,850.00	1.83
Raymond	792	16,974	5,500	278,870	363,474	5,489.83	1.51
Rye	1,200	1,800	500	512,894	589,675	7,318.61	1.24
Salem	5,500	26,470	12,800	513,258	641,230	10,900.86	1.70
Sandown	1,000	2,100	4,140	130,335	168,526	2,990.87	1.77
Seabrook	1,875	3,930	.....	199,914	255,721	6,239.59	2.44
South Hampton	1,665	8,150	2,250	187,168	221,600	3,257.52	1.47
South Newmarket	10,088	25,100	21,208	280,026	378,044	5,670.66	1.50
Stratham	35,189	22,915	3,027	390,076	545,236	5,452.36	1.00
Windham	2,900	16,022	11,800	284,850	360,090	4,753.19	1.32
Totals	$917,871	$1,384,626	$772,230	$18,638,801	$25,482,475	$418,034.67	

TABLE No. 1.—*Continued.*

STRAFFORD COUNTY.

Towns.	Polls.		Asses and Mules.		Hogs.		Carriages.		Stocks in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Barrington	287	$28,700	....	.....	6	$45	3	$200	$1,000	$5,200	.....	$620
Dover	3,283	328,300	....	.....	27	420	165	18,720	25,250	230,604	.....	93,710
Durham	233	23,300	....	.....	....	.....	16	1,070	89,500	30,900	.....	.....
Farmington	785	78,500	....	.....	....	.....	54	4,160	.....	27,700	.....	.....
Lee	152	15,200	....	.....	....	.....	4	360	3,000	7,100	.....	.....
Madbury	95	9,500	....	.....	12	111	10	770	.....	12,600	.....	.....
Middleton	75	7,500	....	.....	4	22	2	115	.....	.....	.....	.....
Milton	391	39,100	....	.....	....	.....	23	1,535	.....	2,500	.....	.....
New Durham	192	19,200	5	$225	2	20	7	425	.....	.....	.....	.....
Rochester	2,223	222,300	1	40	15	244	44	4,470	.....	94,100	$100	.....
Rollinsford	449	44,900	....	.....	1	15	28	1,675	3,000	26,500	.....	12,000
Somersworth	1,393	139,300	....	.....	....	.....	110	8,803	.....	156,200	.....	52,000
Strafford	314	31,400	....	.....	2	22	9	525	.....	2,000	.....	.....
Totals	9,872	$987,200	6	$265	69	$899	475	$42,828	$121,750	$345,404	$100	$158,330

STRAFFORD COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Barrington	$1,993	$21,500	$4,000	$338,106	$446,372	$13,391.16	3.00
Dover	211,372	1,214,817	1,191,278	5,637,110	9,065,157	163,172.83	1.80
Durham	11,300	11,500	1,200	332,186	533,308	9,067.95	1.70
Farmington	125,894	59,700	7,000	983,420	1,341,875	32,947.95	2.45
Lee	14,090	18,150	5,440	204,330	302,700	4,036.00	1.33
Madbury	31,351	21,225	.....	166,388	264,455	2,304.91	.87
Middleton	50	4,025	1,200	79,705	101,213	1,366.83	1.35
Milton	22,450	25,250	33,550	422,440	578,410	13,014.09	2.25
New Durham	3,500	4,000	4,500	175,450	227,878	4,673.81	2.05
Rochester	18,006	462,850	315,330	2,442,412	3,660,656	69,525.00	1.90
Rollinsford	28,080	64,933	404,334	571,463	1,183,721	14,025.11	1.18
Somersworth	560	243,525	915,000	1,391,342	2,942,196	*	.....
Strafford	1,815	9,715	1,650	383,118	479,825	8,829.28	1.84
Totals	$460,461	$2,171,190	$2,884,482	$13,127,470	$21,127,766	$336,354.92	

* Amount of taxes not returned.

TABLE No. 1.—*Continued.*

BELKNAP COUNTY.

Towns.	Polls.		Asses and mules.		Hogs.		Carriages.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Alton	407	$40,700	2	$50	10	$100	12	$843	.....	$3,600	.....	.....
Barnstead	318	31,800	....	.....	7	91	18	1,175	.....	325	.....	.....
Belmont	314	31,400	....	.....	15	86	11	590	$644	11,100	.....	.....
Centre Harbor	143	14,300	....	.....	40	402	41	3,194	.....	600	.....	.....
Gilford	200	20,000	....	.....	12	100	2	150	.....	3,800	.....	.....
Gilmanton	294	29,400	....	.....	16	160	4	310	.....	8,550	.....	.....
Laconia	2,634	263,400	....	.....	65	440	134	10,659	3,000	161,100	$4,300	$27,500
Meredith	431	43,100	....	.....	49	438	12	940	.....	7,400	.....	.....
New Hampton	217	21,700	....	.....	17	92	3	210	.....	300	.....	.....
Sanbornton	240	24,000	....	.....	20	188	4	242	.....	1,400	500	.....
Tilton	362	36,200	2	200	6	37	40	3,540	2,200	31,100	.....	.....
Totals	5,560	$556,000	4	$250	257	$2,134	281	$21,853	$5,844	$229,275	$4,800	$27,500

BELKNAP COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Alton	$12,600	$15,350	$3,100	$456,887	$582,736	$12,354.00	2.12
Barnstead	6,205	6,675	5,900	408,543	516,028	7,518.00	1.45
Belmont	15,622	19,496	25,800	363,148	507,754	7,868.39	1.55
Centre Harbor	14,746	11,400	....	176,442	242,242	2,613.34	1.08
Gilford	3,150	2,006	.....	292,432	355,368	7,295.49	2.05
Gilmanton	6,540	14,404	8,020	408,448	533,104	12,474.63	2.34
Laconia	69,317	287,310	364,286	3,149,774	4,419,312	74,592.75	1.69
Meredith	22,500	23,450	7,600	452,153	608,843	12,818.78	2.11
New Hampton	5,300	9,365	.....	228,500	301,137	5,360.51	1.78
Sanbornton	3,600	3,790	1,000	270,920	357,020	4,855.47	1.36
Tilton	53,590	44,800	52,000	499,110	753,567	15,271.81	2.03
Totals	$213,170	$438,046	$467,706	$6,706,357	$9,177,111	$163,023.17	

TABLE No. 1.—*Continued.* CARROLL COUNTY.

Towns.	Polls.		Asses and Mules.		Hogs.		Carriages.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Albany	80	$8,000	....	.....	....	.....	....	.....	.....	.....	.....	.....
Bartlett	380	38,000	....	.....	5	$56	30	$3,086	.....	.....	.....	.....
Brookfield	89	8,900	....	.....	7	66	....	.....	.....	.....	.....	.....
Chatham	78	7,800	....	.....	....	.....	....	.....	.....	.....	.....	.....
Conway	887	88,700	....	.....	27	238	69	4,428	.....	.....	$100	.....
Eaton	132	13,200	1	$6	....	.....	2	120	.....	.....	.....	.....
Effingham	161	16,100	....	.....	13	100	....	.....	.....	$400	.....	.....
Freedom	191	19,100	....	.....	....	.....	26	1,345	$1,500	3,000	.....	.....
Hart's Location	27	2,700	....	.....	....	.....	....	.....	.....	.....	2,000	.....
Jackson	135	13,500	....	.....	14	158	52	4,670	.....	.....	.....	.....
Madison	133	13,300	....	.....	....	.....	2	116	.....	.....	.....	.....
Moultonborough	268	26,800	....	.....	6	36	16	925	.....	5,700	.....	.....
Ossipee	415	41,500	....	.....	8	102	7	510	.....	1,100	.....	.....
Sandwich	320	32,000	....	.....	7	72	19	1,150	.....	.....	.....	.....
Tamworth	283	28,300	2	50	4	34	31	2,134	.....	.....	.....	.....
Tuftonborough	194	19,400	....	.....	8	64	....	.....	.....	300	.....	.....
Wakefield	393	39,300	....	.....	5	46	21	1,270	.....	6,392	.....	.....
Wolfeborough	680	68,000	2	150	10	86	38	2,310	.....	44,700	500	$6,840
Totals	4,846	$484,600	5	$206	114	$1,058	313	$22,064	$1,500	$61,592	$2,600	$6,840

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Albany	.....	$2,094	$5,500	$54,602	$78,122	$2,729.85	3.49
Bartlett	$1,310	24,900	14,000	244,853	351,614	7,795.11	2.22
Brookfield	1,400	3,375	2,300	95,223	128,580	2,142.99	1.66
Chatham	.....	.....	1,700	68,983	92,689	1,953.75	2.12
Conway	17,424	66,524	21,400	589,512	844,384	18,708.15	2.22
Eaton	1,600	6,510	1,400	96,814	136,672	2,869.65	2.10
Effingham	2,700	6,600	6,425	171,825	229,928	4,023.74	1.79
Freedom	3,430	9,100	1,700	194,825	266,397	4,848.42	1.82
Hart's Location	5,000	1,000	.....	20,700	32,820	425.00	1.29
Jackson	6,750	4,576	.....	188,746	242,862	3,648.14	1.50
Madison	2,206	4,480	1,050	109,468	146,468	3,514.71	2.40
Moultonborough	4,400	24,716	.....	253,270	351,137	5,828.87	1.66
Ossipee	2,300	33,586	11,000	374,114	510,170	13,265.35	2.60
Sandwich	15,190	12,610	3,910	335,472	459,017	12,485.26	2.72
Tamworth	15,200	17,900	5,078	266,610	373,642	8,658.00	2.32
Tuftonborough	2,414	4,640	1,200	203,568	261,060	7,237.77	2.77
Wakefield	50,402	31,710	15,800	423,080	604,128	9,061.92	1.50
Wolfeborough	11,848	48,574	6,250	929,920	1,179,646	26,738.87	2.27
Totals	$143,574	$302,895	$98,713	$4,621,585	$6,289,336	$135,935.55	

TABLE No. 1.—*Continued.*

MERRIMACK COUNTY.

Towns.	POLLS.		ASSES AND MULES.		HOGS.		CARRIAGES.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Allenstown	295	$29,500	....	.....	4	$26	6	$340	.....	$2,200	.....	.....
Andover	307	30,700	...	.....	6	78	14	922	.....	19,300	$100	.....
Boscawen	345	34,500	....	.....	18	316	15	885	$7,800	4,600	.....	.....
Bow	193	19,300	....	.....	9	94	....	.....	.....	11,200	.....	.....
Bradford	230	23,000	....	.....	15	140	33	1,790	7,000	5,100	2,545	.....
Canterbury	228	22,800	2	$200	37	339	2	130	.....	200	.....	.....
Chichester	177	17,700	2	100	4	47	....	.....	.....	12,000	.....	.....
Concord	4,375	437,500	1	40	96	1,021	486	26,895	57,500	263,265	14,300	$223,195
Danbury	169	16,900	.. .	.....	1	6	2	140	.....	.....	.....	.....
Dunbarton	135	13,500	....	.....	14	204	1	80	2,000	1,300	.....	.....
Epsom	227	22,700	....	.....	24	328	8	458	750	4,900	.....	.....
Franklin	1,057	105,700	....	.....	14	127	56	4,260	.....	49,000	.....	.....
Henniker	353	35,300	....	.....	25	279	25	1,290	800	3,500	5,600	.....
Hill	147	14,700	....	.....	10	80	1	80	.....	1,000	.....	.....
Hooksett	366	36,600	2	250	9	100	11	985	.....	11,000	.....	.....
Hopkinton	420	42,000	2	80	43	438	28	2,100	2,000	13,630	3,200	.....
Loudon	312	31,200	....	....	28	292	8	455	500	2,000	.....	.....
Newbury	133	13,300	....	.....	14	184	8	432	2,750	3,600	.....	.....
New London	184	18,400	....	.....	13	175	26	1,685	6,000	800	.....	.....

Northfield	245	24,500	....	.....	5	41	12	825	1,100	2,300	.....	1,000
Pembroke	736	73,600	4	400	9	124	36	2,288	13,500	16,400	4,500	.....
Pittsfield	517	51,700	....	.....	8	115	77	4,360	.....	10,100	.....	10,125
Salisbury	173	17,300	....	.....	1	10	1	60	.....	400	.....	.....
Sutton	215	21,500	....	.....	26	294	12	938	1,000	1,200	.....	.....
Warner	358	35,800	2	75	13	102	35	2,050	.....	5,950	.....	.....
Webster	140	14,000	...	.....	12	145	5	355	2,000	600	2,100	.....
Wilmot	178	17,800	2	200	....	.....	7	500	.....	.....	.....	.....
Totals	12,215	$1,221,500	17	$1,345	458	$5,105	915	$54,303	$104,700	$445,515	$32,345	$234,320

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Allenstown	$20,000	$38,600	$238,000	$306,370	$648,332	$6,094.33	.94
Andover	17,078	30,098	8,800	313,032	461,490	5,537.68	1.20
Boscawen	19,996	64,575	55,500	444,612	661,566	14,123.81	2.13
Bow	22,348	21,750	43,100	275,214	420,483	4,300.24	1.02
Bradford	32,016	18,175	6,225	282,586	423,991	5,864.50	1.38
Canterbury	12,232	9,000	2,600	389,224	488,460	5,128.83	1.05
Chichester	1,859	4,100	2,850	219,435	295,846	4,734.89	1.60
Concord	485,141	719,465	125,000	8,387,870	10,894,907	204,585.27	1.88
Danbury	7,155	7,530	2,600	166,120	229,089	3,157.52	1.38
Dunbarton	14,065	22,680	2,000	253,855	346,248	3,785.88	1.09
Epsom	2,100	16,450	6,800	252,329	346,675	5,200.53	1.50
Franklin	7,300	235,975	578,100	1,308,655	2,353,710	37,659.36	1.60
Henniker	16,935	30,712	37,000	482,822	673,636	10,104.59	1.50
Hill	3,050	5,300	4,950	131,150	180,483	2,256.04	1.25
Hooksett	4,970	23,538	110,500	458,742	682,556	8,942.08	1.31
Hopkinton	42,280	26,744	25,000	643,544	872,223	14,163.00	1.62
Loudon	9,435	4,400	.....	404,387	507,585	7,106.19	1.40
Newbury	10,965	8,600	2,200	201,656	271,188	2,712.18	1.00
New London	42,687	9,600	.....	225,125	345,680	3,802.70	1.10
Northfield	9,222	11,190	33,500	388,714	499,436	6,450.04	1.29
Pembroke	35,050	80,050	227,500	703,566	1,205,370	12,053.70	1.00

Pittsfield	12,435	68,080	91,500	817.615	1,128,020	21,425.00	1.90
Salisbury	4,400	3,550	3,700	230,596	295,462	5,761.50	1.95
Sutton	22,300	10,326	600	250,542	351,102	5,196.30	1.48
Warner	51,428	34,404	.....	503,661	692,955	9,701.28	1.40
Webster	20,771	5,090	4,900	203,820	286,448	2,864.48	1.00
Wilmot	2,350	6,350	5,300	170,513	235,600	3,771.20	1.60
Totals	$929,568	$1,516,332	$1,618,225	$18,415,710	$25,798,541	$416,483.12	

TABLE No. 1.—*Continued.*

HILLSBOROUGH COUNTY.

Towns.	POLLS.		ASSES AND MULES.		HOGS.		CARRIAGES.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Amherst	263	$26,300	....	.....	8	$86	38	$2,730	$1,700	$8,300	.....	.....
Antrim	396	39,600	....	.....	7	70	15	995	.....	9,900	.....	.....
Bedford	271	27,100	....	.....	68	785	13	970	.....	1,150	.....	.....
Bennington	189	18,900	....	.....	....	.....	2	100	.....	2,600	.....	.....
Brookline	208	20,800	....	.....	2	15	19	1,130	.....	840	.....	.....
Deering	137	13,700	....	.....	....	.....	6	390	1,900	2,000	.....	.....
Francestown	198	19,800	....	.....	7	106	24	1,610	1,700	2,800	.....	.....
Goffstown	521	52,100	1	$40	17	244	31	1,964	.....	12,800	.....	$346
Greenfield	158	15,800	....	.....	15	161	7	445	.....	1,000	.....	.....
Greenville	347	34,700	....	.....	4	60	36	2,334	.....	.....	.....	.....
Hancock	188	18,800	2	125	5	55	7	505	200	12,100	.....	.....
Hillsborough	639	63,900	1	20	25	372	26	1,746	1,000	8,350	.....	11,000
Hollis	248	24,800	4	300	2	15	8	525	680	23,700	.....	.....
Hudson	277	27,700	....	.....	....	.....	11	730	.....	8,600	$500	1,900
Litchfield	68	6,800	....	.....	....	.....	5	250	.....	18,000	.....	.....
Lyndeborough	165	16,500	....	.....	4	54	....	.....	.....	1,000	1,000	.....
Manchester	11,835	1,183,500	....	.....	12	120	....	59,916	5,600	317,600	.....	175,370
Mason	159	15,900	....	.....	3	70	12	920	.....	.....	.....	.....
Merrimack	234	23,400	....	.....	....	.....	9	545	.....	10,160	.....	.....
Milford	784	78,400	....	.....	1	12	134	8,795	1,600	57,000	.....	.....

Mont Vernon.....	122	12,200	....	.....	....	.....	13	850	.....	300	.....	.....
Nashua	5,333	533,300	....	.....	28	290	....	23,470	26,240	203,510	9,200	61,100
New Boston.....	263	26,300	....	.....	246	3,714	20	1,150	2,950	2,380	1,000	.....
New Ipswich.....	217	21,700	....	.....	....	.....	9	900	.....	.....	.....	.....
Pelham	211	21,100	....	.....	39	316	10	645	.....	2,800	.....	.....
Peterborough ...	583	58,300	....	.....	5	64	55	3,685	15,600	51,125	12,000	27,873
Sharon.....	36	3,600	....	.....	1	15	....	.....	.....	.....	.....	.....
Temple	76	7,600	....	.....	18	180	....	.....	1,000	1,600	.....	.....
Weare.....	423	42,300	....	.....	8	142	30	1,636	.....	4,000	.....	.....
Wilton	419	41,900	....	.....	141	2,268	49	3,460	2,900	7,726	4,000	3,000
Windsor.....	12	1,200	....	.....	....	.....	....	.....	.....	.....	.....	.....
Totals.....	24,980	$2,498,000	8	$485	666	$9,214	589	$122,396	$63,070	$771,341	$27,700	$280,589

HILLSBOROUGH COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Amherst	$15,100	$14,188	$6,800	$513,570	$637,314	$8,460.85	1.33
Antrim	38,322	54,800	29,350	328,810	545,782	10,915.64	2.00
Bedford	57,456	7,570	2,150	468,059	618,289	8,093.00	1.31
Bennington	3,300	18,300	.....	173,220	229,357	6,079.00	2.65
Brookline	21,570	12,620	10,250	220,034	300,824	4,963.35	1.65
Deering	3,657	1,175	300	157,125	207,366	3,722.43	1.80
Francestown	16,250	16,050	3,700	308,168	406,156	5,523.72	1.33
Goffstown	106,628	45,188	7,150	847,478	1,145,126	13,696.03	1.20
Greenfield	9,860	18,745	.....	189,854	262,486	4,121.66	1.57
Greenville	19,400	56,350	256,500	318,566	703,576	8,020.76	1.14
Hancock	2,825	10,070	2,100	243,565	324,564	4,608.87	1.42
Hillsborough	9,300	78,300	63,150	760,080	1,067,170	20,920.16	1.96
Hollis	28,660	7,895	8,800	488,115	632,840	7,911.15	1.25
Hudson	18,910	8,304	500	528,774	640,798	9,355.65	1.46
Litchfield	13,222	14,189	.....	163,460	229,952	1,254.74	.55
Lyndeborough	2,770	6,050	2,190	222,924	284,422	4,835.19	1.70
Manchester	249,964	2,551,318	6,667,906	15,944,694	27,444,142	507,640.81	1.85
Mason	22,641	10,662	2,650	241,319	315,416	3,789.69	1.20
Merrimack	2,200	19,175	22,950	461,499	573,106	7,259.07	1.27
Milford	132,640	111,650	151,350	1,159,260	1,764,982	30,006.54	1.70
Mont Vernon	9,700	1,200	1,000	248,296	294,598	3,829.61	1.30

Nashua	222,588	922,650	2,568,700	7,814,278	12,502,142	237,531.74	1.90
New Boston	36,234	28,175	10,800	409,631	582,868	7,636.01	1.31
New Ipswich	2,100	11,676	106,410	343,842	514,568	8,627.94	1.68
Pelham	18,235	16,895	10,400	374,110	485,570	4,855.70	1.00
Peterborough	139,378	87,935	146,200	861,519	1,458,155	16,768.78	1.15
Sharon	.....	200	900	57,245	67,893	1,132.25	1.66
Temple	10,096	1,200	1,000	133,020	175,128	2,854.58	1.63
Weare	25,792	38,558	5,530	503,330	688,504	9,501.44	1.39
Wilton	48,167	55,985	80,850	674,255	972,614	14,589.21	1.50
Windsor	1,665	.....	.....	31,794	36,989	302.73	.82
Totals	$1,288,630	$4,227,073	$10,169,586	$35,189,894	$56,108,697	$978,808.30	

TABLE No. 1.—*Continued.*

CHESHIRE COUNTY.

Towns.	POLLS.		ASSES AND MULES.		HOGS.		CARRIAGES.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Alstead	211	$21,100	....	.....	15	$174	15	$1,240	$600	$25,000	$1,000	.....
Chesterfield	277	27,700	....	.....	37	329	6	325	.....	4,400	.....	.....
Dublin	119	11,900	....	.....	9	135	50	4,535	3,600	8,300	.....	.....
Fitzwilliam	255	25,500	....	.....	1	25	26	1,780	1,500	3,750	89	.....
Gilsum	169	16,900	2	$136	5	72	28	2,064	.....	6,000	2,100	$1,500
Harrisville	186	18,600	....	.....	6	72	24	1,475	.....	1,100	.....	.....
Hinsdale	593	59,300	....	.....	31	350	11	655	.....	2,000	.....	.....
Jaffrey	328	32,800	....	.....	33	420	41	3,210	6,800	62,950	.....	15,000
Keene	2,051	205,100	....	.....	50	566	150	12,081	150,450	465,300	.....	236,600
Marlborough	452	45,200	....	.....	9	110	22	1,770	.....	6,900	.....	.....
Marlow	149	14,900	....	.....	16	178	14	896	4,100	30,077	.....	.....
Nelson	61	6,100	2	200	2	20	....	.....	.....	.....	.....	.....
Richmond	122	12,200	1	10	5	70	5	290	.....	500	.....	.....
Rindge	245	24,500	....	.....	52	826	25	1,900	.....	6,800	.....	.....
Roxbury	34	3,400	....	.....	2	12	5	150	.....	.....	.....	.....
Stoddard	102	10,200	....	.....	....	.....	....	.....	.....	3,000	.....	.....
Sullivan	73	7,300	....	.....	4	52	15	880	.....	8,300	.....	.....
Surry	73	7,300	....	.....	12	172	9	660	.....	500	.....	34
Swanzey	428	42,800	....	.....	4	45	37	2,310	800	3,100	500	.....

Troy	277	27,700	....	.....	1	15	33	2,055	.....	700	.....	.....
Walpole	689	68,900	....	.....	87	830	28	3,250	5,000	25,000	11,200	6, 270
Westmoreland	247	24,700	....	.....	40	391	34	2,065	2,000	4,400	.....	.....
Winchester	779	77,900	....	.....	37	610	30	2,200	4,000	70,400	.....	33,960
Totals	8,020	$802,000	5	$346	458	$5,474	608	$45,811	$178,250	$738,477	$14,889	$293,364

TABLE NO. 1.—*Continued.*

CHESHIRE COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Alstead	$19,955	$21,800	$14,300	$351,795	$503,004	$6,288.51	1.25
Chesterfield	30,627	12,970	14,150	491,850	637,639	9,505.00	1.49
Dublin	40,859	7,060	1,750	408,800	512,823	6,564.18	1.28
Fitzwilliam	28,172	18,370	15,375	345,785	470,912	6,263.12	1.33
Gilsum	14,359	21,005	25,500	174,205	288,122	3,317.13	1.15
Harrisville	5,689	34,868	48,100	189,290	320,941	5,969.50	1.86
Hinsdale	16,698	116,050	103,725	671,360	1,011,357	22,250.15	2.20
Jaffrey	61,850	55,640	39,800	504,750	827,158	8,685.57	1.05
Keene	460,592	469,918	171,200	4,168,745	6,464,708	89,401.00	1.37
Marlborough	47,649	29,556	36,800	431,388	636,185	8,909.75	1.40
Marlow	17,575	8,000	4,750	162,700	276,464	1,852.74	.65
Nelson	810	2,600	5,125	108,099	135,379	2,084.82	1.54
Richmond	4,755	16,860	9,500	158,205	220,372	3,085.04	1.40
Rindge	33,895	10,325	.....	402,715	517,964	6,733.95	1.30
Roxbury	950	.....	.....	58,064	69,012	717.72	1.04
Stoddard	2,724	2,500	3,800	134,322	170,020	2,720.37	1.60
Sullivan	4,568	1,566	4,400	92,550	139,170	2,677.14	1.92
Surry	6,734	250	1,900	114,910	151,480	2,272.20	1.50
Swanzey	19,895	40,000	54,200	521,365	729,420	7,658.91	1.05

Troy	14,784	45,065	70,950	306,430	489,724	6,759.33	1.38
Walpole	132,636	67,790	3,000	1,095,700	1,526,758	21,851.88	1.43
Westmoreland	39,375	8,595	2,570	354,383	502,317	5,525.49	1.10
Winchester	59,935	131,280	113,900	877,028	1,436,069	20,674.00	1.44
Totals	$1,065,086	$1,122,068	$744,795	$12,124,439	$18,036,908	$251,767.50	

TABLE No. 1.—*Continued.*

SULLIVAN COUNTY.

Towns.	POLLS.		ASSES AND MULES.		HOGS.		CARRIAGES.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Acworth	170	$17,000	....	.....	8	$58	3	$150	.....	$5,600	.....	.....
Charlestown	387	38,700	....	.....	45	454	10	975	$5,650	41,900	$20,000	$1,127
Claremont	1,587	158,700	....	.....	77	959	124	11,056	1,000	151,800	.....	44,000
Cornish	222	22,200	2	$400	82	916	9	530	.....	8,800	.....	.....
Croydon	114	11,400	....	.....	12	121	3	175	.....	5,380	.....	.....
Goshen	87	8,700	....	.....	1	13	....	.....	1,270	4,100	.....	.....
Grantham	104	10,400	....	.....	8	57	....	.....	.....	500	.....	.....
Langdon	95	9,500	2	100	16	162	....	.....	4,800	6,200	.....	.....
Lempster	128	12,800	....	.....	2	20	3	170	1,200	.....	500	.....
Newport	708	70,800	4	400	40	358	26	2,692	3,000	99,564	.....	.....
Plainfield	281	28,100	....	.....	35	378	11	276	.....	8,000	.....	.....
Springfield	132	13,200	....	.....	10	113	3	180	.....	700	.....	.....
Sunapee	237	23,700	....	.....	6	64	10	550	4,100	8,680	.....	.....
Unity	145	14,500	....	.....	30	320	....	.....	.....	5,250	.....	.....
Washington	149	14,900	....	.....	8	98	9	528	200	.....	.....	.....
Totals	4,546	$454,600	8	$900	380	$4,091	211	$17,382	$21,220	$346,474	$20,500	$45,127

SULLIVAN COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Acworth	$8,673	$3,000	$2,400	$220,545	$304,664	$5,120.15	1.68
Charlestown	17,790	19,650	.....	616,450	830,115	9,949.64	1.20
Claremont	129,600	203,700	372,950	1,843,850	3,038,630	53,175.68	1.75
Cornish	6,324	5,782	6,250	366,890	476,984	6,713.39	1.41
Croydon	10,774	2,825	.....	149,475	209,692	3,159.84	1.51
Goshen	1,300	3,700	1,300	106,414	148,585	1,857.32	1.25
Grantham	1,150	6,735	.....	102,805	139,417	2,916.91	2.09
Langdon	19,028	150	1,000	164,344	233,594	2,496.61	1.07
Lempster	3,358	1,825	3,670	129,792	180,013	3,338.47	1.85
Newport	36,706	75,800	84,700	982,024	1,436,614	28,732.28	2.00
Plainfield	22,082	8,050	3,500	390,574	529,792	7,734.96	1.46
Springfield	1,910	2,300	400	110,829	154,847	4,032.84	2.60
Sunapee	3,960	8,600	.....	280,840	358,516	5,604.70	1.56
Unity	5,540	500	.....	169,813	233,321	3,849.42	1.65
Washington	13,066	9,436	6,880	216,526	289,292	4,050.17	1.40
Totals	$281,261	$352,053	$483,050	$5,851,171	$8,564,076	$142,732.38	

TABLE No. 1.—*Continued.*

GRAFTON COUNTY.

Towns.	Polls.		Asses and mules.		Hogs.		Carriages.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Alexandria	182	$18,200	....	.....	3	$46	8	$560	.....	.....	.....	.....
Ashland	313	31,300	....	.....	....	.....	24	1,548	.....	$12,000	$500	.....
Bath	268	26,800	....	.....	84	591	11	740	.....	7,500	.....	.....
Benton	60	6,000	....	.....	....	.....	....	.....	.....	.....	.....	.....
Bethlehem	343	34,300	8	$240	87	656	....	7,475	.....	1,000	.....	.....
Bridgewater	84	8,400	....	.....	2	13	8	470	.....	.....	.....	.....
Bristol	377	37,700	1	20	14	150	32	1,860	.....	13,800	.....	.....
Campton	267	26,700	....	.....	3	18	19	1,164	.....	3,300	.....	.....
Canaan	371	37,100	1	50	13	97	8	545	$1,300	600	.....	.....
Dorchester	100	10,000	....	.....	7	58	....	.....	.....	.....	.....	.....
Easton	85	8,500	....	.....	....	.....	....	.....	.....	500	.....	.....
Ellsworth	41	4,100	....	.....	....	.....	....	.....	.....	.....	.....	.....
Enfield	349	34,900	....	.....	32	325	12	795	3,500	7,400	.....	.....
Franconia	152	15,200	1	10	29	348	....	3,700	.....	7,400	.....	.....
Grafton	207	20,700	....	.....	14	126	2	100	.....	1,000	.....	.....
Groton	131	13,100	....	.....	....	.....	....	.....	.....	.....	.....	.....
Hanover	451	45,100	1	10	24	234	14	1,000	1,600	36,440	20	.....
Haverhill	714	71,400	....	.....	131	1,044	7	446	2,000	7,500	500	.....
Hebron	69	6,900	....	.....	5	36	10	500	.....	.....	.....	.....

Holderness	159	15,900	3	60	9	86	17	1,056				
Landaff	131	13,100			14	158				3,000		
Lebanon	1,099	109,900			30	412	65	4,538	4,400	67,800	1,610	$8,000
Lincoln	74	7,400			24	144						
Lisbon	567	56,700			70	536	38	3,317	750	500		3,500
Littleton	847	84,700			53	580	43	4,050		84,650		17,000
Livermore	15	1,590			20	100						
Lyman	148	14,800			33	312						
Lyme	293	29,300	2	80	36	421	5	270				
Monroe	126	12,600			68	516	1	60		1,500		
Orange	58	5,800										
Orford	215	21,500			47	456	10	550	500	600		
Piermont	190	19,000			64	634	4	200				
Plymouth	436	43,600			32	338	43	2,850		26,900		
Rumney	258	25,800			24	172	3	150		1,000		
Thornton	153	15,300			3	30						
Warren	239	23,900			11	140	36	2,000		800		
Waterville	9	900					2	100				
Wentworth	211	21,100			7	46						
Woodstock	111	11,100			4	30	18	1,530		10,200		
Totals	9,903	$990,300	17	$470	997	$8,853	440	$41,574	$14,050	$295,390	$2,630	$28,500

GRAFTON COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Alexandria	$11,450	$6,300	$3,690	$149,216	$223,200	$3,733.18	1.67
Ashland	4,500	47,796	60,100	303,301	488,067	7,711.45	1.58
Bath	11,430	21,000	10,000	367,180	510,327	10,002.40	1.96
Benton	.....	3,000	300	78,177	100,009	1,912.23	1.91
Bethlehem	7,600	39,640	18,700	561,627	721,347	13,315.59	1.84
Bridgewater	345	802	.....	87,321	112,473	2,249.48	2.00
Bristol	21,550	61,950	62,200	441,310	666,070	13,654.14	2.02
Campton	7,400	16,810	12,210	233,748	346,030	8,650.75	2.50
Canaan	21,536	27,000	7,475	372,891	515,927	8,099.80	1.57
Dorchester	.....	6,100	.....	81,268	115,170	3,743.02	3.25
Easton	3,766	17,700	.....	72,571	119,420	1,493.45	1.25
Ellsworth	.....	.....	.....	20,338	29,325	965.92	3.29
Enfield	30,585	27,050	15,400	414,690	587,185	9,759.07	1.66
Franconia	27,860	6,475	.....	308,883	390,433	5,465.63	1.40
Grafton	12,875	11,700	8,350	196,408	287,020	5,337.69	1.86
Groton	.....	4,420	7,650	77,802	117,062	3,244.83	2.77
Hanover	69,778	38,660	38,200	730,784	1,042,402	14,369.04	1.38
Haverhill	149,450	50,400	30,900	838,240	1,240,618	14,425.57	1.16
Hebron	.....	2,130	.....	67,092	88,696	1,623.22	1.83
Holderness	1,260	3,356	1,500	181,708	234,056	4,751.52	2.03
Landaff	18,100	5,338	250	156,028	224,188	2,611.90	1.17

Lebanon	172,657	187,000	.....	1,609,818	2,267,524	39,611.16	1.74
Lincoln	.....	35,450	.....	70,905	124,513	1,170.42	.94
Lisbon	58,006	43,280	17,500	724,489	991,889	21,517.81	2.17
Littleton	42,160	123,800	.....	1,123,527	1,571,552	33,592.00	2.14
Livermore	.....	5,000	.....	89,150	99,310	914.98	.92
Lyman	200	1,200	5,300	131,530	188,672	2,906.14	1.54
Lyme	16,600	14,210	6,400	340,240	475,266	5,225.85	1.10
Monroe	23,152	48,000	30,900	146,306	293,252	3,460.02	1.18
Orange	500	100	150	49,765	67,339	1,448.03	2.15
Orford	10,900	13,105	4,000	295,429	402,329	6,039.48	1.50
Piermont	29,546	9,150	8,100	239,010	361,980	5,787.26	1.60
Plymouth	.....	54,600	7,650	585,544	764,888	14,077.76	1.84
Rumney	4,964	14,300	6,950	209,895	293,551	7,338.78	2.50
Thornton	800	11,007	1,025	136,729	187,812	6,672.51	3.55
Warren	19,890	15,202	7,850	177,484	274,790	3,709.66	1.35
Waterville	50	8,150	400	37,721	49,462	583.40	1.12
Wentworth	100	9,900	3,600	145,794	207,970	3,787.10	1.82
Woodstock	450	7,818	1,320	109,264	151,328	3,667.54	2.43
Totals	$779,460	$998,899	$378,070	$11,963,183	$16,932,452	$297,729.78	

TABLE No. 1.—*Continued.* COÖS COUNTY.

Towns.	Polls.		Asses and mules.		Hogs.		Carriages.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Berlin	1,407	$140,700	2	$100	9	$84	23	$1,474	.....	$18,500	.....	.....
Carroll	168	16,800	....	.....	51	426	54	3,430	.....	.....	.....	.....
Clarksville	78	7,800	....	.....	6	35	....	.....	.....	.....	.....	.....
Colebrook	455	45,500	....	.....	76	507	9	660	.....	37,200	.....	.....
Columbia	160	16,000	....	.....	28	165	28	1,410	.....	1,000	.....	.....
Dalton	138	13,800	....	.....	10	74	....	.....	.....	.....	.....	.....
Dummer	103	10,300	1	40	3	15	....	.....	.....	.....	.....	.....
Errol	56	5,600	....	.....	4	20	8	470	.....	.....	.....	.....
Gorham	478	47,800	....	.....	12	120	37	2,814	.....	12,500	....	$710
Jefferson	329	32,900	....	.....	5	46	27	2,120	.....	.....	.....	.....
Lancaster	1,072	107,200	....	.....	94	696	77	5,674	.....	60,400	.....	.....
Milan	258	25,800	....	.....	29	158	....	.....	.....	600	.....	.....
Northumberland	461	46,100	....	.....	28	208	....	.....	.....	9,000	.....	.....
Pittsburg	162	16,200	16	1,000	16	136	6	300	.....	2,000	.....	.....
Randolph	36	3,600	....	.....	....	.....	....	.....	.....	.....	.....	.....
Shelburne	91	9,100	....	.....	22	126	19	1,510	.....	400	.....	.....
Stark	223	22,300	....	.....	1	20	....	.....	.....	.....	.....	.....
Stewartstown	285	28,500	....	.....	60	688	11	710	.....	2,200	.....	55
Stratford	266	26,600	....	.....	33	229	27	1,483	.....	25,200	.....	.....
Wentworth's Location	17	1,700	....	.....	....	.....	2	130	.....	.....	.....	.....
Whitefield	573	57,300	1	10	49	300	53	2,776	.....	2,500	.....	.....
Totals	6,816	$681,600	20	$1,150	536	$4,053	381	$24,961	.....	$171,500	.....	$765

COÖS COUNTY.

Towns.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.	Rate per cent.
Berlin	$7,904	$158,450	$360,800	$669,710	$1,390,940	$32,826.18	2.36
Carroll	.....	21,800	20,100	196,166	276,962	5,599.33	2.02
Clarksville	5,275	24,256	.....	81,868	141,430	1,440.67	1.02
Colebrook	96,315	75,985	.....	489,175	820,612	9,844.73	1.20
Columbia	924	9,600	10,850	193,395	267,093	4,255.92	1.59
Dalton	.....	9,200	.....	111,700	156,220	6,264.42	4.01
Dummer	1,925	34,660	4,000	75,775	142,206	3,199.68	2.25
Errol	572	15,968	.....	87,558	120,006	3,419.07	2.85
Gorham	6,074	35,424	7,500	342,373	478,780	9,066.04	1.89
Jefferson	1,250	8,970	830	214,854	305,212	6,714.66	2.20
Lancaster	17,020	94,920	11,450	951,010	1,334,964	27,238.20	2.04
Milan	5,825	44,390	2,600	170,355	280,146	7,283.79	2.60
Northumberland	8,450	70,305	26,900	368,580	572,949	8,880.71	1.55
Pittsburg	4,147	67,438	.....	238,127	363,705	5,927.44	1.63
Randolph	.....	3,300	1,000	49,744	63,300	1,552.80	2.45
Shelburne	1,220	3,180	2,550	98,350	127,748	2,018.25	1.58
Stark	12,284	31,224	29,000	171,750	290,588	4,358.82	1.50
Stewartstown	20,774	17,697	3,200	243,197	359,899	4,859.69	1.35
Stratford	9,773	40,670	5,416	258,940	400,400	5,290.61	1.32
Wentworth's Location	200	1,120	950	16,696	22,162	485.66	2.19
Whitefield	12,750	110,000	30,800	406,327	684,286	11,734.57	1.71
Totals	$212,682	$878,557	$517,946	$5,435,650	$8,599,608	$162,261.24	

TABLE NO. 1.—*Continued.*

SUMMARY.

Counties.	Polls.		Asses and Mules.		Hogs.		Carriages.		Stock in public funds.	Stock in banks and other corporations in this state.	Stock in corporations out of this state.	Surplus capital of banking institutions.
	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.	Number.	Valuation.				
Rockingham .	12,464	$1,246,400	8	$165	398	$4,692	937	$89,860	$193,695	$903,690	$9,200	$205,868
Strafford.....	9,872	987,200	6	265	69	899	475	42,828	121,750	345,404	100	158,330
Belknap.....	5,560	556,000	4	250	257	2,134	281	21,853	5,844	229,275	4,800	27,500
Carroll.....	4,846	484,600	5	206	114	1,058	313	22,064	1,500	61,592	2,600	6,840
Merrimack...	12,215	1,221,500	17	1,345	458	5,105	915	54,303	104,700	445,515	32,345	234,320
Hillsborough.	24,980	2,498,000	8	485	666	9,214	589	122,396	63,070	771,341	27,700	280,589
Cheshire.....	8,020	802,000	5	346	458	5,474	608	45,811	178,250	738,477	14,889	293,364
Sullivan.....	4,546	454,600	8	900	380	4,091	211	17,382	21,220	346,474	20,500	45,127
Grafton.....	9,903	990,300	17	470	997	8,853	440	41,574	14,050	295,390	2,630	28,500
Coös.....	6,816	681,600	20	1,150	536	4,053	381	24,961	.....	171,500	.....	765
Totals....	99,222	$9,922,200	98	$5,582	4,333	$45,573	5,150	$483,032	$704,079	$4,308,658	$114,764	$1,281,203

SUMMARY.

Counties.	Money on hand, at interest, or on deposit.	Stock in trade.	Mills and their machinery.	Lands and buildings.	Amount of inventory.	Amount of taxes.
Rockingham	$917,871	$1,384,626	$772,330	$18,638,801	$25,482,475	$418,034.67
Strafford	460,461	2,171,190	2,884,482	13,127,470	21,127,766	336,354.92
Belknap	213,170	438,046	467,706	6,706,357	9,177,111	163,023.17
Carroll	143,574	302,895	98,713	4,621,585	6,289,336	135,935.55
Merrimack	929,568	1,516,332	1,618,225	18,415,710	25,798,541	416,483.12
Hillsborough	1,288,630	4,227,073	10,169,586	35,189,894	56,108,697	978,808.30
Cheshire	1,065,086	1,122,068	744,795	12,124,439	18,036,998	251,767.50
Sullivan	281,261	352,053	483,050	5,851,171	8,564,076	142,732.38
Grafton	779,460	998,899	378,070	11,963,183	16,932,452	297,729.78
Coös	212,682	878,557	517,946	5,435,650	8,599,608	162,261.24
Totals	$6,291,763	$13,391,739	$18,134,903	$132,074,260	$196,117,060	$3,303,130.63
Deposits in savings banks (less amount invested in real estate) with tax thereon					77,024,282	770,242.82
Capital in insurance companies with tax thereon					1,675,000	16,750.00
Amount of property taxed and taxes assessed					$274,816,342	$4,090,123.45
Average rate per cent., including tax on deposits in savings banks and insurance capital, 1.50						
Amount of property taxed and taxes assessed in 1892					$266,427,500	$3,941,561.64
Average rate per cent. in 1892, 1.48.						

TABLE NO. 2.

Number, Value, and Average per Head of Horses, Cattle, and Sheep in each Town in April, 1893.

ROCKINGHAM COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Atkinson	156	$8,490	$54.42	12	$555	$46.25	481	$10,860	$22.58	30	$470	$15.66	10	$27	$2.70
Auburn	177	11,215	63.25	20	960	48.00	278	6,104	21.96	42	713	16.98	51	219	4.29
Brentwood	260	21,315	81.98	36	2,205	61.25	374	8,612	23.03	86	1,207	14.03	87	278	3.20
Candia	293	15,128	51.63	42	1,748	41.62	409	8,129	19.88	62	941	15.18	30	92	3.06
Chester	226	17,245	76.31	36	1,555	43.19	377	8,237	21.85	78	1,449	18.58	124	368	2.97
Danville	138	8,602	62.33	18	854	47.44	124	2,915	23.51	5	80	16.00	10	40	4.00
Deerfield	410	22,450	54.76	182	9,516	52.29	718	13,820	19.25	216	3,484	16.13	347	1,134	3.27
Derry	587	29,748	50.68	30	1,130	37.66	850	16,566	19.49	120	1,778	14.82	19	62	3.26
East Kingston	146	8,734	59.82	27	1,156	42.84	195	4,446	22.80	39	516	13.23	55	194	3.53
Epping	326	21,355	65.51	62	3,430	55.32	316	7,800	24.68	132	2,344	17.76	202	917	4.59
Exeter	538	42,285	78.60	36	1,685	46.81	354	7,290	20.59	61	835	13.69	51	165	3.23
Fremont	156	10,645	68.24	27	1,070	39.63	193	4,025	20.85	27	423	15.67	49	169	3.45
Greenland	197	11,415	57.94	32	1,750	54.69	546	12,682	23.15	67	985	14.85	126	378	3.00
Hampstead	243	15,260	62.80	4	235	58.75	229	5,215	22.78	23	314	13.65	5	25	5.00
Hampton	242	15,115	62.46	19	990	52.11	455	8,219	28.06	34	446	13.12	101	335	3.32
Hampton Falls	180	14,225	79.03	20	990	49.50	381	9,174	24.09	55	906	16.47	135	543	4.02
Kensington	183	9,935	54.29	46	2,005	43.59	479	9,859	20.58	79	1,174	14.86	182	681	3.74

Kingston	261	14,535	55.69	20	640	32.00	249	4,088	16.42	22	320	14.55	40	140	3.50
Londonderry	411	25,755	62.54	12	530	44.17	814	18,753	23.04	81	1,061	13.10	54	183	3.39
Newcastle	66	5,594	84.76				32	820	25.62						
Newington	163	9,865	60.52	8	340	42.50	475	11,625	24.47	43	625	14.53	36	108	3.00
Newmarket	277	16,890	60.97	44	2,087	47.43	437	9,874	22.59	41	619	15.10	69	264	3.83
Newton	213	14,045	65.94	8	370	46.25	188	4,505	23.94	7	119	17.00			
North Hampton	238	14,525	61.03	8	290	36.25	697	15,171	21.77	105	1,541	14.68	226	906	4.01
Northwood	418	22,698	54.30	73	2,830	38.77	336	6,910	20.57	103	1,385	13.45	92	287	3.12
Nottingham	268	12,551	46.83	92	4,155	45.16	404	8,374	20.73	82	946	11.54	204	815	4.00
Plaistow	170	15,009	88.29	4	180	45.00	221	5,258	23.79	2	50	25.00			
Portsmouth	969	95,062	98.10	49	3,070	62.65	712	21,365	30.01	95	1,565	16.47	82	270	3.29
Raymond	269	18,377	68.31	52	2,254	43.35	312	6,671	21.38	98	1,444	14.73	188	562	2.99
Rye	345	19,107	55.38	8	390	48.50	558	13,342	23.91	59	834	14.14	22	96	4.36
Salem	346	23,230	67.14	10	440	44.00	600	13,656	22.76	56	934	16.73	60	184	3.06
Sandown	106	5,288	49.89	54	2,230	41.30	168	3,549	21.12	21	349	16.62	30	130	4.33
Seabrook	161	6,690	41.55	16	600	37.50	160	3,248	20.30	10	129	12.90			
So. Hampton	119	6,760	56.81	20	1,050	52.50	174	4,563	26.22	32	501	15.66	18	108	6.00
So. Newmarket	106	8,124	76.53	19	986	51.89	109	2,964	27.24	26	372	14.31	56	224	4.00
Stratham	315	25,817	81.96	26	1,445	55.58	586	11,430	19.51	58	838	14.45	136	411	3.02
Windham	224	14,389	64.24	12	545	45.42	469	10,706	22.83	58	926	15.97	36	135	3.75
Totals	9,903	$657,473	$66.39	1,184	$56,266	$47.52	14,460	$320,825	$22.19	2,155	$32,723	$15.18	2,933	$10,450	$3.56

TABLE No. 2.—*Continued.*

STRAFFORD COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Barrington	393	$20,356	$51.80	114	$4,660	$40.88	623	$13,362	$21.45	238	$3,901	$16.39	225	$648	$2.88
Dover	1,063	88,468	83.22	44	2,336	53.09	840	19,788	23.56	144	2,354	16.35	136	530	3.90
Durham	240	18,940	78.92	58	2,660	45.86	387	9,040	23.36	59	960	16.27	197	788	4.00
Farmington	519	35,565	68.53	78	4,080	52.31	590	11,384	19.29	210	3,812	18.15	220	660	3.00
Lee	238	15,900	66.81	56	2,914	52.04	404	10,194	25.23	119	2,110	17.73	324	1,212	3.74
Madbury	144	12,335	85.66	34	2,055	60.44	280	6,755	24.12	80	962	12.02	115	403	3.51
Middleton	85	3,605	42.41	36	1,385	38.47	99	1,712	17.29	72	1,382	19.19	168	512	3.05
Milton	324	19,304	59.58	52	2,635	50.67	383	7,398	19.32	92	1,555	16.90	206	693	3.36
New Durham	171	10,695	62.54	62	2,945	47.45	229	4,907	21.43	108	1,751	16.21	84	260	3.10
Rochester	1,069	72,466	67.78	95	4,020	42.32	1,008	21,434	21.26	148	2,144	14.49	200	740	3.70
Rollinsford	209	16,250	77.75	12	830	69.17	335	8,970	26.78	37	555	15.00	72	216	3.00
Somersworth	394	30,375	77.09	10	480	48.00	229	4,507	19.68	.....	.....	.....	25	104	4.16
Strafford	369	20,585	55.79	146	7,830	53.63	682	14,174	20.78	324	5,474	16.90	519	1,544	2.97
Totals	5,218	$364,844	$69 92	797	$38,830	$48.72	6,089	$133,625	$21.94	1,631	$26,960	$16.53	2,491	$8,310	$3.34

BELKNAP COUNTY.

Alton	432	$27,251	$63.08	112	$4,660	$41.61	643	$12,768	$19.86	206	$3,376	$16.39	323	$1,051	$3.25
Barnstead	445	29,200	65.62	89	4,500	50.56	663	14,290	21.55	361	6,083	16.85	349	1,241	3.56
Belmont	383	22,982	60.01	90	3,434	38.16	515	10,551	20.41	155	1,955	12.61	252	946	3.75
Centre Harbor	198	11,674	58.96	62	2,494	40.23	245	4,526	18.47	94	1,800	19.15	158	594	3.76
Gilford	186	10,370	55.75	106	5,232	49.36	443	9,642	21.76	382	5,818	15.23	817	2,568	3.14
Gilmanton	404	26,458	65.49	164	6,984	42.59	574	11,682	20.35	531	8,686	16.36	1,079	3,462	3.21
Laconia	747	63,296	84.73	66	3,732	56.54	481	9,222	19.17	101	1,552	15.37	77	374	4.86
Meredith	419	26,505	63.26	168	7,119	42.37	654	11,741	17.95	288	4,726	16.41	383	1,171	3.07
New Hampton	285	17,160	60.21	104	4,101	39.43	502	9,070	18.07	252	3,449	13.69	563	1,690	3.00
Sanbornton	373	22,998	61.63	134	6,024	44.96	679	13,870	26.43	293	4,212	14.38	1,362	4,276	3.14
Tilton	290	20,531	70.79	57	2,150	37.72	326	6,420	19.69	55	641	11.65	292	1,048	3.59
Totals	4,162	$278,425	$66.90	1,152	$50,450	$43.78	5,725	$113,782	$19.87	2,718	$42,298	$15.56	5,655	$18,421	$3.26

TABLE NO. 2.—*Continued.* CARROLL COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Albany	98	$5,354	$54.63	39	$1,308	$33.54	72	$1,050	$14.58	23	$214	$9.30	.....	.....	.....
Bartlett	321	19,167	59.40	8	306	38.25	277	5,150	18.59	33	412	12.48	130	$374	$2.88
Brookfield	120	7,459	62.16	70	3,403	48.61	212	4,688	22.11	66	1,164	17.64	179	602	3.36
Chatham	125	6,370	50.96	72	2,420	33.61	187	3,135	16.76	96	1,265	13.18	300	1,016	3.39
Conway	772	40,176	52.04	102	3,140	30.78	657	10,756	16.37	145	1,556	10.73	193	430	2.23
Eaton	143	7,892	55.19	96	3,670	38.23	196	3,474	17.72	90	1,452	16.13	188	534	2.84
Effingham	238	14,750	61.97	108	4,100	37.96	280	4,994	17.84	114	1,751	15.36	52	183	3.52
Freedom	289	18,308	63.35	139	4,993	35.92	331	5,447	16.46	174	2,219	12.75	494	1,430	2.89
Hart's Location	15	1,225	81.67	2	50	25.00	6	145	24.17	.....	.....	.....	.....	.....	.....
Jackson	226	14,546	64.36	60	2,582	43.03	285	5,120	17.96	59	764	12.95	512	1,450	2.83
Madison	172	9,420	54.77	59	2,116	35.86	193	2,987	15.48	48	699	14.56	222	626	2.82
Moultonborough	262	15,944	60.85	162	6,168	38.07	323	6,233	19.30	251	5,152	20.53	416	1,343	3.23
Ossipee	438	24,448	55.82	167	7,649	45.80	527	9,871	18.73	199	3,167	15.91	279	747	2.68
Sandwich	447	25,328	56.66	239	11,118	46.52	646	14,098	21.82	343	5,718	16.67	745	2,351	3.16
Tamworth	354	21,958	62.00	123	5,518	44.86	381	8,020	21.05	139	1,860	13.38	227	980	4.32
Tuftonborough	216	12,496	57.85	116	4,374	37.71	417	8,086	19.39	255	4,048	15.89	124	470	3.79
Wakefield	275	17,124	62.27	180	7,938	44.10	443	8,378	18.91	153	2,142	14.00	208	546	2.63
Wolfeborough	561	34,520	61.53	132	5,294	40.11	724	14,663	20.25	316	5,140	16.27	298	841	2.82
Totals	5,072	$296,485	$58.46	1,874	$76,147	$40.63	6,157	$116,295	$19.03	2,504	$38,723	$15.46	$4,576	$13,923	$3.04

Allenstown	107	$8,113	$75.82	18	$950	$52.78	111	$2,449	$22 06	27	$484	$17.93	47	$170	$3.62
Andover	343	20,963	61.12	112	4,790	42.77	489	10,970	22.43	149	2,248	15.09	816	2,357	2.89
Boscawen	297	17,470	58.82	49	2,410	49.18	368	7,249	19.70	34	543	15.97	309	1,110	3.59
Bow	228	13,278	58.24	57	2,710	47.54	480	9,301	19.38	110	1,662	15.11	68	242	3.56
Bradford	264	17,934	67.93	86	3,801	44.20	699	15,699	22.46	296	4,534	15.32	1,015	3,446	3.40
Canterbury	309	23,042	74.57	146	6,980	47.81	617	12,876	20.87	347	6,104	17.59	823	2,733	3.32
Chichester	235	16,428	69.91	74	4,180	56.49	484	11,348	23.45	237	4,741	20.00	265	968	3.65
Concord	1,686	115,823	68.70	84	4,425	52.68	1,331	30,415	22.85	159	2,113	13.29	334	939	2.81
Danbury	211	10,842	51.38	122	4,586	37.59	494	9,174	18.57	174	2,298	13.21	616	1,638	2.66
Dunbarton	188	13,648	72.60	89	4,512	50.70	625	15,076	24.11	187	2,864	15.32	147	444	3.02
Epsom	275	18,178	66.10	80	4,738	59.23	632	13,551	21.44	154	2,240	14.55	341	1,153	3.38
Franklin	698	47,823	68.50	65	2,500	38.46	571	11,598	20.31	77	1,099	14.27	463	1,523	3.29
Henniker	363	26,903	74.11	130	5,891	45.32	842	19,283	22.90	391	5,717	14.62	599	1,604	2.68
Hill	186	10,601	56.99	38	1,462	38.47	289	5,538	19.16	81	1,035	12.78	662	1,537	2.32
Hooksett	298	23,361	78.39	30	1,455	48.50	383	9,379	24.49	69	1,393	20.19	57	219	3.84
Hopkinton	514	34,492	67.11	115	5,888	51.20	1,172	25,825	22.03	266	4,064	15.28	349	938	2.69
Loudon	415	23,660	57.01	178	9,095	51.10	753	14,660	19.47	408	4,949	12.11	876	2,552	2.91
Newbury	182	13,344	73.32	62	2,912	46.97	350	7,648	21.85	124	2,060	16.61	422	1,537	3.64
New London	314	23,070	73.47	128	5,480	42.81	350	8,120	23.20	163	2,485	15.25	730	2,003	2.74
Northfield	270	16,086	59.58	61	2,830	46.39	384	6,397	16.66	88	1,022	11.61	251	693	2.76
Pembroke	393	30,374	77.29	22	1,230	55.91	522	12,608	24.15	155	1,958	12.63	133	496	3.73
Pittsfield	414	41,360	99.90	76	3,870	50.92	494	13,780	27.89	122	1,840	15.08	243	1,140	4.69
Salisbury	235	14,974	63.72	111	5,230	47.12	405	8,306	20.51	132	2,496	18.91	1,476	4,318	2.93
Sutton	266	15,632	58.77	126	6,298	49.98	486	11,462	23.58	408	6,284	15.40	962	2,706	2.81
Warner	451	28,758	63.76	112	5,740	51.25	846	19,232	22.73	195	3,299	16.92	845	2,501	2.96
Webster	267	17,740	66.44	56	2,520	45.00	340	7,615	22.40	38	2,098	55.21	1,101	2,694	2.43
Wilmot	240	13,080	54.50	124	5,085	41.00	413	9,091	22.01	165	2,401	14.55	1,103	2,930	2.66
Totals	9,649	$656,977	$68.09	2,351	$111,568	$47.46	14,930	$328.650	$22.01	4,756	$74,031	$15.57	15,053	$44,591	$2.97

TABLE No. 2.—*Continued.*

HILLSBOROUGH COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Amherst	331	$25,764	$77.84	24	$900	$37.50	976	$19,450	$19.93	146	$2,162	$14 81	5	$14	$2.80
Antrim	374	20,545	54.92	80	3,935	49.19	642	14,859	23.14	201	2,957	14.71	394	1,409	3.58
Bedford	460	30,240	65.74	34	1,810	53.24	1,051	25,125	23.91	120	1,773	14.77	40	136	3.40
Bennington	116	7,885	67.96	16	610	38.13	182	4,045	22.23	24	297	12.38	43	100	2.33
Brookline	175	10,000	57.14	8	335	41.87	161	3,065	19.04	10	165	16.50	.....	.....	.....
Deering	183	9,400	51.37	84	4,130	49.17	525	10,559	20.11	139	2,176	15.65	274	854	3.12
Francestown	258	17,572	68.11	52	2,738	52.65	599	13,256	22.13	110	1,450	13.18	292	956	3.27
Goffstown	588	40,480	68.84	93	5,024	54.02	955	22,204	23.25	163	2,618	16.06	174	524	3.01
Greenfield	161	11,937	74.14	42	1,965	46.79	486	10,973	22.58	83	1,186	14.29	139	560	4.34
Greenville	142	10,230	72.04	6	290	48.34	185	4,709	25.45	16	304	19.00	20	55	2.75
Hancock	223	15,430	69.19	64	2,790	43.60	481	10,174	21.15	249	3,767	15.13	153	523	3.42
Hillsborough	518	39,756	76.71	114	5,858	51.39	940	19,014	20.23	274	4,000	14.60	377	1,324	3.51
Hollis	343	25,915	75.52	10	480	48.00	920	21,025	22.85	139	1,665	11.98	32	135	4.22
Hudson	305	30,506	100.02	6	370	61.67	665	12,500	18.80	93	1,128	12.13	65	234	3.60
Litchfield	137	7,855	57.33	6	300	50.00	234	5,500	23.50	16	250	15.62	25	126	5.04
Lyndeborough	191	12,188	64.07	38	1,914	50.37	711	16,082	22.62	94	1,422	15.13	31	96	3.10
Manchester	2,777	210,032	75.63	11	450	40.91	473	10,296	21.77	67	910	13.58	13	38	2.92
Mason	147	11,325	77.04	20	900	45.00	357	7,738	21.67	62	1,052	16.97	17	54	3.17

Merrimack	233	18,620	79.91	32	1,520	47.50	523	11,435	21.86	84	1,237	14.73	44	215	4.89
Milford	533	39,860	74.78	8	435	54.37	835	20,987	25.13	103	1,345	13.06	52	191	3.67
Mont Vernon	164	11,866	72.35	8	240	30.00	387	8,574	22.16	27	368	13.63	1	4	4.00
Nashua	1,364	103,418	75.82	10	624	62.40	644	12,420	19.29	19	214	11.26	28	140	5.00
New Boston	365	26,957	73.85	84	4,525	53.87	965	24,794	25.88	206	2,801	13.60	286	792	2.77
New Ipswich	218	14,456	66.31	17	682	40.12	426	10,186	23.91	76	1,088	14.32	16	62	3.87
Pelham	300	18,620	62.07	6	240	40.00	954	19,975	20.94	88	1,404	15.95	.....	.....	.....
Peterborough	450	33,490	74.42	44	2,325	52.84	559	13,525	24.19	272	4,720	17.35	107	416	3.89
Sharon	62	3,905	62.98	13	470	36.15	67	1,199	17.89	20	227	11.35	41	132	3.23
Temple	129	7,890	66.31	28	1,040	37.14	458	8,988	19.62	80	1,190	14.87	47	252	5.36
Weare	462	29,328	63.48	151	7,708	51.05	1,028	22,566	21.95	375	5,390	14.37	868	2,102	2.42
Wilton	353	26,145	74.07	40	1,846	46.15	735	17,293	23.53	106	1,548	14.06	199	617	3.10
Windsor	18	800	44.44	6	270	45.00	47	859	18.28	25	297	11.88	24	114	4.75
Totals	11,980	$872,415	$72.82	1,155	$56,724	$49.11	18,171	$403,375	$22.20	3,487	$51,111	$14 66	3,807	$12,175	$3.20

TABLE No. 2.—*Continued.*

CHESHIRE COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Alstead	362	$25,340	$70.00	58	$2,985	$51.47	512	$10,681	$20.86	147	$2,399	$16.32	1,531	$4,635	$3.03
Cheshire	374	27,523	73.59	107	6,156	57.53	560	13,990	24.98	268	5,517	20.59	535	2,102	3.93
Dublin	202	16,260	80.49	46	2,265	49.24	268	6,445	24.05	89	1,160	13.03	75	234	3.12
Fitzwilliam	242	18,415	76.10	42	2,460	58.57	332	8,175	24.62	76	1,207	15.88	87	284	3.26
Gilsum	179	13,180	73.63	38	2,234	58.79	210	5,347	25.46	118	2,214	18.76	348	1,253	3.60
Harrisville	161	12,840	79.75	36	1,920	53.33	252	4,943	19.61	62	835	13.47	316	1,209	3.83
Hinsdale	381	25,472	66.86	37	2,415	65.27	516	11,581	22.44	102	1,504	14.74	36	197	5.47
Jaffrey	326	26,322	80.74	65	3,080	47.38	531	11,796	22.21	134	1,952	14.56	162	608	3.75
Keene	1,088	94,612	86.96	18	986	54.78	954	23,289	24.41	154	2,333	15.15	806	2,936	3.64
Marlborough	285	24,057	84.41	32	1,688	52.75	336	9,105	27.10	95	1,594	16.78	91	368	4.04
Marlow	210	16,140	76.86	61	3,280	53.77	330	7,256	21.99	136	2,334	17.16	1,242	4,278	3.44
Nelson	92	5,431	59.03	26	1,326	51.00	163	3,546	21.75	59	880	14.92	388	1,232	3.18
Richmond	178	11,120	62.58	20	950	47.50	224	4,637	20.70	49	709	14.47	163	566	3.47
Rindge	289	22,325	77.25	59	2,990	50.68	457	9,312	20.38	119	2,065	17.35	82	311	3.79
Roxbury	51	2,300	45.10	21	1,250	59.53	79	1,656	20.96	27	364	13.48	246	866	3.52
Stoddard	96	5,434	56.60	51	2,176	42.67	160	3,218	20.11	76	1,128	14.84	444	1,518	3.42
Sullivan	122	9,350	76.64	30	1,695	56.50	260	5,951	22.89	65	1,128	17.35	416	1,370	3.29
Surry	157	10,860	69.17	26	1,350	51.92	230	4,788	20.82	64	1,134	17.72	376	979	2.60
Swanzey	425	28,555	67.19	39	1,700	43.59	522	10,293	19.72	164	2,142	13.06	561	1,715	3.06

Troy	202	13,916	68.89	26	1,190	45.77	246	6,315	25.67	37	589	15.92	4	15	3.75
Walpole	678	53,781	79.32	91	5,250	57.69	1,061	27,777	26.18	224	4,762	21.26	5,050	15,412	3.05
Westmoreland	388	29,695	76.44	50	3,025	60.50	858	21,419	24.96	326	6,645	20.38	957	3,054	3.19
Winchester	550	38,795	70.54	54	3,070	56.85	920	20,070	21.82	121	1,606	13.27	289	1,294	4.48
Totals	7,038	$531,723	$75.55	1,033	$55,441	$53.67	9,981	$231,590	$23.20	2,712	$46,201	$17.03	14,205	$46,436	$3.27

SULLIVAN COUNTY.

Acworth	351	$23,507	$66.97	82	$4,050	$49.39	378	$8,723	$23 08	204	$4,290	$21.03	2,038	$6,668	$3.27
Charlestown	470	35,340	75.19	44	2,731	62.07	668	15,427	23.09	144	3,012	20.92	2,661	11,219	4.22
Claremont	947	80,626	85.14	100	4,204	42.04	1,200	25,776	21.48	308	4,277	13.89	2,168	6,052	2.79
Cornish	400	27,550	68.87	89	4,828	54.25	767	17,692	23.07	287	4,960	17.29	1,575	3,862	2.45
Croydon	204	12,217	59.89	84	3,615	43.04	313	5,960	19.04	132	4,167	31.57	1,038	3,583	3.45
Goshen	184	10,707	58.15	48	2,404	50.08	269	5,431	20.19	134	1,958	14.61	390	1,288	3.30
Grantham	142	8,605	60.60	54	2,465	45.56	239	4,779	20.00	74	1,065	14.39	277	856	3.09
Langdon	171	12,472	72.94	52	2,460	47.31	322	8,298	25.77	109	2,054	18.84	1,023	3,026	2.95
Lempster	237	13,087	55.22	71	3,014	42.45	332	7,132	21.48	152	2,258	14.86	384	1,187	3.09
Newport	715	52,301	73.15	122	4,975	40.78	801	16,064	20.05	270	3,604	13.35	1,484	3,626	2.44
Plainfield	499	29,768	59.66	154	6,952	45.14	739	15,194	20.56	469	7,498	15.99	4,048	8,970	2.22
Springfield	213	10,533	49.45	123	4,997	40.63	245	5,298	21.62	123	1,860	15.12	1,088	2,507	2.30
Sunapee	258	15,642	60.63	86	3,680	42.79	313	6,580	21.02	90	1,248	13.87	344	944	2.74
Unity	273	15,895	58.22	109	4,928	45.21	437	9,342	21.38	188	3,120	16.60	1,570	4,113	2.62
Washington	196	13,550	69.13	80	3,590	44.87	346	7,144	20.65	86	1,312	15.26	530	2,016	3.80
Totals	5,260	$361,800	$68.73	1,298	$58,893	$45.37	7,369	$158,840	$21.56	2,770	$46,683	$16.85	20,618	$59,917	$2.91

TABLE No. 2.—*Continued.*

GRAFTON COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Alexandria	257	$17,362	$67.55	124	$5,436	$43.84	285	$5,330	$18.70	205	$3,044	$14.80	843	$2,470	$2.93
Ashland	242	20,486	84.65	29	1,168	40.28	217	4,496	20.72	32	472	14.75	95	274	2.88
Bath	530	30,236	57.05	87	3,934	45.22	967	18,681	19.32	334	5,067	15.17	2,434	7,168	2.94
Benton	109	6,590	60.46	30	1,100	36.67	206	4,063	19.72	52	541	10.40	81	238	2.94
Bethlehem	471	29,420	62.46	51	2,774	54.39	639	13,668	21.39	178	2,665	14.97	447	1,556	3.48
Bridgewater	104	5,958	57.29	58	2,757	47.53	143	2,901	20.99	112	1,924	17.18	566	1,582	2.80
Bristol	335	12,926	38.59	85	3,876	45.60	340	6,446	18.96	109	1,574	14.44	193	708	3.67
Campton	381	22,217	58.33	171	6,854	40.08	452	8,766	19.39	255	3,660	14.35	980	3,183	3.25
Canaan	402	22,659	56.37	106	4,810	45.38	739	14,219	19.24	168	2,414	14.37	1,486	3,231	2.17
Dorchester	139	7,176	51.63	148	5,736	38.76	171	2,980	17.43	48	494	10.29	605	1,358	2.24
Easton	178	9,335	52.44	101	3,805	37.67	106	1,710	16.13	73	959	13.14	210	574	2.73
Ellsworth	36	1,815	50.42	44	1,253	28.48	60	941	15.68	19	224	11.79	230	654	2.84
Enfield	673	25,250	37.52	146	6,770	46.37	600	14,195	23.66	177	2,930	16.55	1,508	3,330	2.21
Franconia	233	13,375	57.40	30	1,345	44.83	227	4,803	21.16	34	427	12.56	161	607	3.77
Grafton	237	14,755	62.26	138	5,541	40.15	435	8,980	20.64	151	2,295	15.20	1,599	4,190	2.62
Groton	141	6,906	48.98	68	2,158	31.74	179	2,836	15.84	91	1,082	11.89	383	1,078	2.81
Hanover	506	44,580	88.10	75	3,564	47.52	919	22,930	24.95	396	6,214	15.69	1,488	3,288	2.21
Haverhill	699	44,304	63.38	52	2,056	39.54	1,734	31,948	18.42	571	8,294	14.53	838	2,136	2.55
Hebron	94	4,664	49.62	49	1,922	39.22	155	3,050	19.68	74	1,080	14.59	481	1,322	2.75

Holderness	210	13,414	63.88	102	5,066	49.67	346	7,292	21.08	169	2,102	12.44	403	1,256	3.12
Landaff	242	13,444	55.55	84	3,548	42.24	287	5,782	20.15	195	2,878	14.76	858	2,562	2.99
Lebanon	688	61,058	88.75	65	3,455	53.15	1,089	26,402	24.24	267	3,939	14.75	2,830	6,460	2.28
Lincoln	161	9,245	57.42	18	910	50.56	28	444	15.86	2	15	7.50	.....	.....	.....
Lisbon	815	48,364	59.34	38	1,631	42.92	983	21,831	22.21	357	4,867	13.63	1,890	6,591	3.49
Littleton	925	55,620	60.13	110	4,268	38.80	1,221	24,131	19.76	262	3,385	12.92	1,171	3,681	3.30
Livermore	61	3,050	50.00	12	420	35.00	3	90	30.00	.....	.....	.....	.....	.....	.....
Lyman	271	14,882	54.92	16	670	41.88	514	13,814	26.88	234	4,098	17.51	485	1,866	3.85
Lyme	400	26,145	65.36	103	5,575	54.13	1,119	25,238	22.55	295	4,783	16.21	2,207	6,004	2.72
Monroe	237	13,614	57.44	22	1,056	48.00	427	9,730	22.79	184	2,954	16.05	837	2,864	3.42
Orange	98	4,225	43.11	39	1,670	42.82	154	3,233	20.99	40	514	12.85	500	1,382	2.76
Orford	375	22,890	61.04	82	4,380	53.41	960	20,997	21.87	267	4,077	15.27	1,049	2,915	2.78
Piermont	363	25,970	71.54	60	2,926	48.76	960	22,356	23.29	188	3,132	16.66	682	1,956	2.87
Plymouth	397	29,402	74.06	75	2,858	38.11	395	8,208	20.78	89	1,248	14.02	663	1,690	2.55
Rumney	331	15,572	47.05	94	3,440	36.60	425	8,377	19.71	106	1,285	12.12	585	1,446	2.47
Thornton	239	12,657	52.96	108	3,515	32.55	272	4,236	15.57	118	1,401	11.87	504	1,112	2.21
Warren	288	15,742	54.66	68	2,947	43.34	318	5,948	18.70	82	1,140	13.90	778	1,747	2.25
Waterville	19	1,270	66.84	21	732	34.86	8	109	13.63	3	30	10.00	.....	.....	.....
Wentworth	263	12,882	48.98	80	3,060	38.25	476	8,794	18.47	127	1,502	11.83	436	1,192	2.73
Woodstock	128	6,342	49.55	32	1,028	32.13	106	1,730	16.32	24	258	10.75	92	258	2.80
Totals	12,278	$745,802	$60.74	2,821	$120,014	$42.54	18,665	$391,685	$20.93	6,088	$88,968	$14.61	30,598	$83,929	$2.74

TABLE No 2.—*Continued.*

COÖS COUNTY.

Towns.	HORSES.		Average per head.	OXEN.		Average per head.	COWS.		Average per head.	OTHER CATTLE.		Average per head.	SHEEP.		Average per head.
	No.	Value.		No.	Value.		No.	Value.		No.	Value.		No.	Value.	
Berlin	374	$27,757	$74.22	8	$240	$30.00	214	$4,630	$21.64	18	$212	$11.78	126	$379	$3.01
Carroll	261	13,390	51.30	8	284	35.50	250	3,972	15.89	31	336	10.84	93	258	2.77
Clarksville	260	12,098	46.53	46	1,465	31.85	255	4,601	18.04	59	743	12.59	1,040	3,298	3.17
Colebrook	881	39,458	44.79	56	2,000	35.71	885	16,126	18.22	500	8,599	17.20	2,491	9,087	3.65
Columbia	376	16,936	45.04	50	1,806	36.12	513	8,730	17.02	223	2,903	13.02	869	3,374	3.88
Dalton	169	8,265	48.91	46	1,750	38.17	374	7,330	19.60	167	1,971	11.80	746	2,130	2.86
Dummer	180	9,247	51.37	12	410	34.16	210	3,946	18.79	72	936	13.00	349	952	2.73
Errol	122	6,762	55.43	6	280	46.67	89	1,511	16.98	49	526	10.73	236	739	3.13
Gorham	295	19,574	66.35	4	180	45.00	154	3,341	21.69	6	64	10.67	105	306	2.91
Jefferson	622	27,330	43.94	70	2,308	32.97	601	10,664	17.74	196	2,600	13.27	580	1,340	2.31
Lancaster	868	50,664	58.37	60	2,236	37.27	1,212	24,454	20.18	397	5,856	14.75	1,058	3,384	3.20
Milan	492	19,110	38.84	66	2,040	30.91	378	6,272	16.59	122	1,362	11.16	613	1,634	2.67
Northumberland	464	26,980	58.15	31	1,200	38.71	490	9,188	18.75	211	3,451	16.36	736	2,587	3.51
Pittsburg	389	18,736	48.16	29	1,020	35.17	438	7,770	17.74	157	1,769	11.27	1,529	5,062	3.31
Randolph	52	2,556	49.15	38	1,510	39.74	63	1,070	16.98	20	238	11.90	98	282	2.88
Shelburne	145	7,704	53.13	10	350	35.00	127	2,506	19.73	39	394	10.10	139	358	2.58
Stark	247	15,575	63.06	28	1,350	48.21	255	4,555	17.86	102	1,298	12.73	304	1,232	4.05
Stewartstown	472	20,390	43.20	45	1,465	32.56	567	9,885	17.43	279	4,533	16.25	1,769	6,605	3.73

Stratford	469	23,193	49.45	20	623	31.15	308	4,953	16.08	117	1,236	10.56	647	1,884	2.91
Wentworth's Loc.	20	1,060	53.00	.....	.....	.....	12	208	17.33	.....	.....	.....	31	98	3.16
Whitefield	581	30,492	67.97	88	3,716	42.23	688	14,061	20.44	197	3,194	16.21	300	1,060	3.53
Totals	7,739	$406,277	$52.50	721	$26,233	$36 38	8,083	$149,773	$18.53	$2,962	$42,221	$14.25	13,859	$46,049	$3.32

TABLE No. 2.—*Continued.*

SUMMARY.

Counties.	Horses.			Oxen.			Cows.			Other cattle.			Sheep.		
	No.	Value.	Av'ge.	No.	Value.	Av'ge.	No.	Value.	Av'ge.	No.	Value.	Av'ge.	No.	Value.	Av'g.
Rockingham....	9,903	$657,473	$66.39	1,184	$56,266	$47.52	14,460	$320,825	$22.19	2,155	$32,723	$15.18	2,933	$10,450	$3.56
Strafford	5,218	364,844	69.92	797	38,830	48.72	6,098	133,625	21.94	1,631	26,960	16.53	2,491	8,310	3.34
Belknap	4,162	278,425	66.90	1,152	50,430	43.78	5,725	113,782	19.87	2,718	42,298	15.56	5,665	18,421	3.26
Carroll....	5,072	296,485	58.46	1,874	76,147	40.63	6,157	116,295	19.03	2,504	38,723	15.46	4,576	13,923	3.04
Merrimack	9,649	656,977	68.09	2,351	111,568	47.46	14,930	328,650	22.01	4,756	74,031	15.57	15,053	44,591	2.97
Hillsborough...	11,980	872,415	72.82	1,155	56,724	49.11	18,171	403,375	22.20	3,487	51,111	14.66	3,807	12,175	3.20
Cheshire.....	7,038	531,723	75.55	1,033	55,441	53.67	9,981	231,590	23.20	2,712	46,201	17.03	14,205	46,436	3.27
Sullivan.....	5,260	361,800	68.73	1,298	58,893	45.37	7,369	158,840	21.56	2,770	46,683	16.85	20,618	59,917	2.91
Grafton.....	12,278	745,802	60.74	2,821	120,014	42.54	18,665	391,685	20.93	6,088	88,968	14.61	30,598	83,929	2.74
Coös.....	7,739	406,277	52.50	721	26,233	36.38	8,083	149,773	18.53	2,962	42,221	14.25	13,859	46,049	3.22
Totals.....	78,299	$5,172,221	$66.06	14,386	$650,546	$45.22	109,639	$2,348,440	$21.42	31,783	$489,919	$15.41	113,795	$344,201	$3.02
Totals for 1892,	75,154	$5,167,418	$68.77	18,072	$773,100	$42.78	100,144	$2,365,125	$21.67	39,502	$589,687	$14.93	117,503	$351,773	$2.99

Total value of live stock, 1893, $9,005,327; 1892, $9,256,103.

ANNUAL REPORT

OF THE

TRUSTEES

OF THE

NEW HAMPSHIRE STATE NORMAL SCHOOL

AT PLYMOUTH

FOR THE

YEAR ENDING AUGUST 31, 1893.

CONCORD:
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1893.

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BOARD OF TRUSTEES.

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GEORGE H. ADAMS, *Treasurer*	Plymouth.

REPORT OF THE TRUSTEES.

To the Honorable Senate and House of Representatives:

The Board of Trustees of the State Normal School respectfully submits the report for the year ending August 31, 1893.

Upon trial, the new buildings for the use of the school have been found to be commodious and comfortable. Experience has shown, however, that some improvements would be beneficial. Consequently a change of fire-escapes has been made for Normal Hall, and now a safe means of egress in case of fire is accessible. Under consideration is the increasing the efficiency of the heating and ventilating apparatus of the buildings. Upon other matters relating to the buildings, no definite action has as yet been taken.

The generous increase of the annual appropriation from $7,000 to $10,000, by the last legislature, while not enabling the trustees to perform miracles, makes a large addition to the resources of the school, and permits outlays, otherwise impossible, that will enhance the effectiveness of the work. For the carrying out of a definite policy in school work, time and a permanent teaching force are essential factors. In order to retain the good teachers, who are worth more than ever to us after experience in the school, and to secure others of high merit, some salaries have been raised. An additional teacher has been put upon the high-school work, relieving the Normal teachers and enlarging the possibilities of both Normal and Model schools by concentration.

With a view to making the courses of both Normal and Model schools meet the requirements for admission to courses in the higher institutions of learning, the curriculums of the schools have been placed in the hands of the committee on text-books and teachers, for such enlargement or modification as may be necessary or expedient.

A common query is, "Why does not the Normal School grow in numbers?" It must be self-evident that schools have other and higher values and standards than mere numerical ones. For the sake of increased membership, a move to lower standards, intellectual or moral, in the Normal School, would be unwise, possibly suicidal. Not for an instant suggesting an easier course to a diploma, and admitting that in a series of years a great growth is apparent, to secure as many students as can be comfortably accommodated is a problem worth the most careful study of all interested in the development of this institution.

So long as no premium is put upon the normal training of teachers by the people, the legislature has a partial remedy for the lack of students in its power: the passing of a statutory provision for the granting by the state authorities of teachers' certificates, and a stipulation of the mental qualifications to be demanded of the teachers of our common schools. The chief work, of course, is an awakening of public sentiment in behalf of the Normal School. The department of public instruction, in its work among high schools and academies, at institutes, and in the towns and cities, should be in the closest possible sympathy and harmony with the authorities of the Normal School. All this is mere reiteration, however, and work must be done rather than words spoken.

The Board of Trustees are arranging such regulations for the conduct of Normal Hall and the school as will recommend themselves to all who appreciate systematic and business-like methods.

The reports of the Treasurer and Principal of the Normal School are embodied in this report.

After several visits to the Normal School, and after close and critical scrutiny of the purposes, means, and methods of the school, the writer is prepared to say that excellent work is doing here, and that the opportunities offered are worthy the serious attention of all intending to enter upon the work of teaching.

Respectfully submitted,

FRED GOWING, *For the Trustees.*

REPORT OF TREASURER.

PLYMOUTH, N. H., Sept. 1, 1893.

To the Trustees of the New Hampshire State Normal School:

GENTLEMEN,—I herewith respectfully submit my report as Treasurer of the State Normal School for the year ending August 31, 1893,—

RECEIPTS.

Cash on hand, Sept. 1, 1892	$5,499.56
Rec'd of State Treasurer, annual appropriation for current expenses	7,000.00
Rec'd of Plymouth school-district	2,000.00
Rec'd for tuition of non-resident pupils in Model schools	285.05
Rec'd of C. C. Rounds for fuel, water, and lights at Normal Hall	1,034.59
Rec'd for oats sold	3.00
Rec'd for old furniture sold	51.51
	$15,873.71

DISBURSEMENTS.

Paid teachers, salaries	$7,767.00
Paid janitor and assistants	544.54
Paid for cabinets, books, and apparatus	625.89
Paid for fuel	1,318.48
Paid for lights	305.45
Paid for repairs	254.04
Paid for wiring and fixtures for electric lights	916.90
Amount carried forward	$11,632.30

Amount brought forward	$11,732.30
Paid for water	75.00
Paid Treasurer's salary to Sept. 1, 1893 . .	50.00
Paid for freight, cartage, advertising, and other incidental expenses	130.00
Balance in Treasurer's hands	3,886.41
	$15,873.71

GEORGE H. ADAMS,
Treasurer.

SEPTEMBER 1, 1893.

I have examined the foregoing account, and find the same correctly cast and properly vouched for.

W. H. MITCHELL,
Auditor.

REPORT OF THE PRINCIPAL.

PLYMOUTH, N. H., OCT. 3, 1893.

To the Trustees of the State Normal School:

GENTLEMEN,—I have the honor to submit my tenth annual report for the twenty-third year in the history of the Normal School.

During these twenty-three years, 1,785 pupils have been connected with the school, and 485 have graduated.

The number of pupils graduating in the last year was 21. The number of different pupils connected with the various departments during the year was as follows:

Total number of different pupils in the Normal School, 86.

Total number in Training-schools:

Primary schools, ...	99
Grammar schools, ...	84
High school, ...	53
	236

Total number in Normal and Training-schools, 322.

With the increasingly generous support from the state which has culminated in the new, commodious, and elegant buildings of the school, in the ample equipment of laboratories and library, and finally in the increase of the annual appropriation for support to $10,000, the Normal School at last takes the place which is its due, and enters upon a new life. With the exception of a course in manual training, its courses of study and training are well organized. The demand for teachers is far beyond our ability to supply. Yet every advance reveals the possibilities of further advance;

the possession of greater facilities and of ample means prescribes new duties and summons to the assumption of higher responsibilities. What has long been desirable has now become practicable.

A LONGER COURSE OF STUDY.

The course of study should be lengthened. More than fifty years ago the first normal school in the United States was established, with a course of one and one half years, soon lengthened to two years. Its work was to prepare teachers for the common schools, with a much simpler course of study then than now. There were no high schools for girls and no girls' colleges. After more than fifty years of trial, the course of study in the state normal schools is still, in most cases, based upon that of the common school, and the applicant who is fully qualified to enter a high school is admitted without conditions. About one half of the last entering class in this school are graduates of high schools, yet to require in this state a high-school education as condition of admission, would break the connection of the Normal School with large portions of the state and would defeat the end for which the school was established. This holds true in most states in which normal schools have been established longest. Even in Massachusetts, where it is said that ninety per cent. of the population is within reach of high schools, high-school graduation has been only within a year required for admission to the normal schools. Generally, the requirement of such condition is evidently considered neither wise nor practicable.

The general normal-school course connects with that of no higher school or college. Hence, comparatively few normal-school graduates pursue more advanced courses in other institutions. The individual is thus deprived of culture almost within reach; his influence is restricted, there is great loss in educational forces.

Few colleges give even the slightest attention to questions of pedagogy; most of their graduates who teach bring to their work scholarship only; the study and application of

principles of method are mostly confined to the lower grades. We find incompleteness of culture below, lack of professional spirit above. The normal school, first established as an institution apart, still remains apart. It is *in* the system of schools, but not *of* it.

The normal-school course develops purpose and ability, and gives rise to a thirst for knowledge. It brings its pupils in sight of fountains of which they cannot drink, because of a barrier which the normal school makes no attempt to remove. By differentiation of courses, by increase of electives, by modification of requirements for admission, colleges and scientific schools have made advances toward other schools. To this advance the normal school has not responded. By the broadening and enriching of courses of study in public schools, increased demands are made upon teachers in regard to art, science, and literature. The rapidly increasing number of graduates from women's colleges crowd the higher grades of schools with teachers of an advanced culture, but without professional preparation. Such adjustments should be made in normal school courses as will open the way to higher culture, not merely to the few who take the advanced courses in these schools, but to all who bear their diplomas.

There has been too much said of an elementary course for teachers of the elementary or common school. It is the elementary school, in which more than nine tenths of our people receive all their school training, which especially needs the teacher of true culture. The advanced course for the comparatively few does not suffice; this cannot take the place of advanced study in association with maturer minds and with the appliances of a broader culture.

In the distinction of classes of studies, the Normal School devotes itself mainly to the modern. Its course fits much better for the scientific than for the classical school. There is great need in the Normal School: first, for the development of more power in the severer studies of the course; second, for the addition of some language other than English. The language may be Latin or French, or both. Without regard to a higher course of study, such an acquisition

would be a benefit to all, of inestimable value to some. Every graduate of a normal school should have a reading knowledge of the French language, so as to be able to draw at will upon the rich resources of the language in pedagogy, history, science, and art. There is not time to master the difficulties of German, so as to give command of its literature. With the general conditions of admission to the Normal School strictly enforced, a three years course may be so arranged as to enable a graduate to pursue with profit a wide range of selected higher studies, and also to open the way to valuable courses offered in some of the best colleges and scientific schools. Furthermore, such a liberalizing of the studies of the Normal School will be a vast advantage to those who advance no farther, and through them to the schools of the state.

Propositions to broaden the course of study in the Normal School are met by the statement that normal schools should devote themselves to professional and not to academic work. No one acquainted with the New Hampshire Normal School will charge it with neglect of professional study and training; yet no study of methods, nor practice in training-schools can take the place of that sound scholarship which must be the basis of all successful teaching. In pleading for such extension and modification of the general normal school course, we can cite high authority from countries in which normal schools have been largest established, and in which systems of public education are most fully developed.

In this selection from the normal school courses of several countries, for ease of comparison with the courses of American schools, the number of lessons per week in the studies named is summed up and presented in the equivalent number of lessons per week in a course of one year. Of course this presents not the real amount of work per week, but merely the ratios:

PRUSSIA.

Three-years Course—Pedagogy, 6; German, 15; geography, 5; history, 6; arithmetic, 7; geometry, 6; science, 10; drawing, 5; Latin, French, and English, optional.

AUSTRIA.

FOUR-YEARS COURSE—Pedagogy, 17; mother tongue, 16; geography, 7; history, 8; mathematics, 14; science, 16; drawing, 7; a foreign language, 12.

SWITZERLAND (Zurich).

FOUR-YEARS COURSE—Pedagogy, 7; German, 20; geography, 6; history, 12; mathematics, 22; science, 16; drawing, 12; French, 14.

FRANCE.

THREE-YEARS COURSE.—Pedagogy, $3\frac{1}{2}$; French language and literature, 16; geography, 3; history, 10; arithmetic, 8; geometry, 6; science, 12; agriculture and horticulture, 3; drawing, 12; a foreign language (optional), 6.

I have deemed it best, gentlemen, to take the brief space which I can rightly claim in your report for a somewhat full presentation of this one topic, now of most vital interest to the New Hampshire State Normal School. What we have done and are doing, you have opportunity to know from your personal inspection. Wants pressed upon your attention in previous years have been largely supplied, or are now under consideration by you. To this demand, which the future will present with increasing emphasis, I call your attention, and would bespeak for it your thoughtful consideration.

Respectfully submitted,

CHARLES C. ROUNDS.